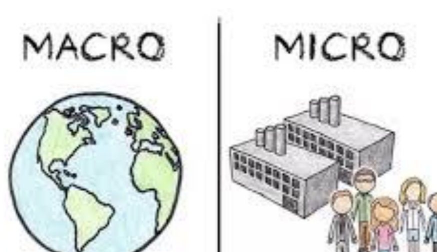

ECONOMICS FOR FINANCE

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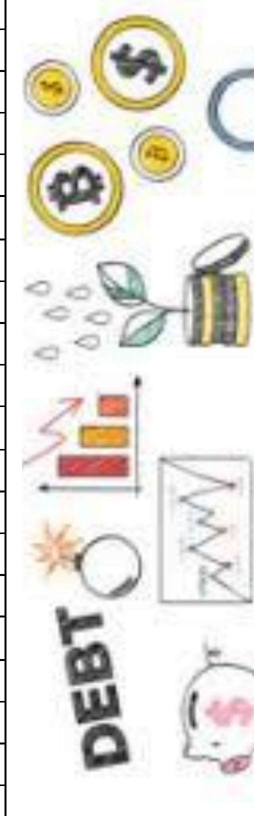


Preface

First of all I would like to thank my parents, my guide, my teachers, colleagues, my beloved students and almighty for continuously inspiring me and showing me the right path.

Lots of efforts and research was involved in curating this book. I feel delighted to introduce the new and revised version of Economics For Finance. The book is drafted keeping ICAI guidelines and previous exam questions. The book is made with at-most detail keeping in mind the level of exams; however some errors may creep-in unintentionally. Learning is a continuous process and thus I feel glad to update the error if any.

About the book-

The book is divided into Four chapters. These Four chapters covers the entire relevant concepts which relevant for exams. Question bank is designed covering all questions which are asked in past exams and in study material.

Efforts were made to include 100% syllabus in the book however some part which was considered irrelevant from knowledge as well as exam point of view was eliminated.

All the best

CA. Aditya Sharma

Chapter No. 1: National Income

Unit 1: Basics and Flow of Income

Just as there are accounting conventions which measure the performance of business, there are conventions for measuring and analyzing the economic performance of a nation.

What is National Income?

National Income is defined **as money value[1] of final goods and services[2] produced by the normal residents[3]** of a country, whether **operating within the domestic territory[4]** of the country or outside produced within **in an accounting year[5].**

a. Expressed in Money Value-

In any Economy there are **large number of diverse goods and services** produced. Thus, it becomes necessary to measure their value against **some commonly accepted denominator**. Thus, money being the measuring rod, National income is expressed in monetary terms.

b. Final Value of Goods and services-

1. **Value final goods and services** are **included** in computation of national income and value of **intermediate products*** are not included in calculation of national income.
2. In order to calculate National income, all goods and services produced during a year must be counted **only once.**
3. Since most of the products undergo different stages of production, if included again, will result in **double counting** and national income will be overstated.

Intermediate goods are those goods and services which are used by producers as input into further stage of production

Rs.1000

Rs.1500

Rs.100000

E.g. Rubber (Rs. 1000) is used in manufacturing of tyres (Rs. 1500) and ultimately tyres are the used in cars (Rs. 1,00,000), since the value of tyres, and rubber are already included in value of car, its inclusion will lead to double counting.

If we add the value of all the intermediary products the national income in this case will be 1000+1500+100000 =102500. However, the correct NI will should be 100000 only.

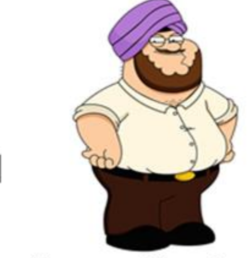
The final products are of two types- Consumer Goods and Services and Producer Goods-

1. **Consumer Goods-** Where the goods and services are used for final consumption by the consumer, it is called as Consumer Goods and services.
   E.g. – TV, Food, Home appliances.

2. **Producers Goods-** Where the final product is used in production of other goods/ service in future, it is called as Producers goods.
   E.g. Computer used for developing programs or software, Plant and Machinery used in manufacturing of goods

c. Normal resident-

1. **Normal resident** of **a country** refers to **an individual** or an institution who ordinarily resides in the country and whose center of **economic interest** also lies in that country.
2. **Normal residents** include both, **individuals and institutions**. Therefore, a foreigner's Income who is working in India will be a normal resident but a tourist whose purpose to visit is not of contribute in economic activity of Country will not be called as normal resident of Country.
3. Here the word **'Resident'** is used and not the word 'Citizen'. Hence, they may or may not be citizen of that country


Indian Working in India

An Indian Institution

Foreigner who resides and work in India

Tourist

d. Domestic territory:

1. Domestic territory refers to **geographical or political boundary** of country.
2. It however does not include- **international institutional** (United nations, WHO, WTO) and **foreign embassies** located within geographical territory but includes embassies of this country located outside its geographical territory
3. **Indian Ship and Indian aircrafts** performing operations outside country is also included in domestic territory.

e. Current output:

While calculating National income value of only current production is included, this is because the value of previous year's production is included in Previous year's National Income.

Question: what is domestic product?

Answer: The money value of final goods and services produced within a year within its domestic territory of a country is called domestic product.

National income does not include the following transactions:

1. **Pure purchase transaction** such as **sale and purchase of used goods/ second- hand goods**, this is because nothing new is produced in the current year.
   However, where the goods are refurbished the added value must be taken in calculation of National Income.
2. **Sale, purchase of securities** is also excluded because it is just a change of ownership.
3. **Transfer payments** are included as there is no economic activity involved. E.g Pocket money by Parents, Gift to Son in law.

Question 1- Suppose Mr. Nawaz sells his Rolce Royce to Mr. Dutt for Rs. 1,00,000 and to arrange this sale transaction Miss Alia charged commission of 10,000. Will the sale value of

car be included in calculation of national income? What treatment will be given to commission charged by Mr. Chichi for arranging sale of second- hand car?
Answer:

The sale transaction: -	The Brokerage component: -
The Sale of Second-hand car by Mr. Nawaz to Mr. Dutt **does not reflect current year's production** and thus shall not be included in calculation of National Income.	The brokerage charged by Mr. Chichi **are the service rendered by him in current year** and thus shall be included in calculation of National income.

Question 2: Will the sale and purchase of shares on NSE qualify for Calculation of National Income? What will be the treatment of commission charged?

Transfer Payment-

Transfer payments are **unilateral payments for which no productive services are rendered in return in the current year.** The recipients of this transfer payment do not make any contribution to current production in return for these payments
E.g. Pension is given to a person in C.Y for rendering services in past, Unemployment allowance.

Flow concept vs stock concept

Flow concept:- National income is a flow concept because it is measured **over a period of time**. It expresses the flow of money value of goods and services over a period of time.
Stock variable:- The variable which is expressed **at a point of time**. For example, stock of finished goods on 31st March 2018.

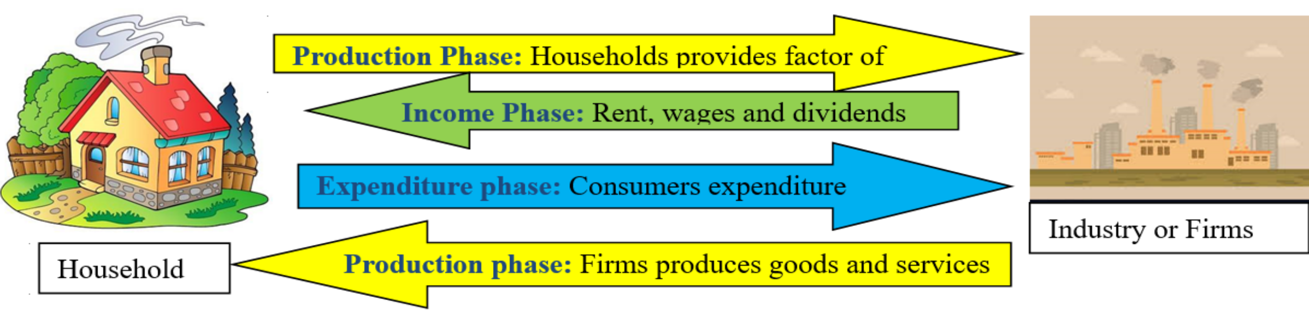
USEFULNESS OF NATIONAL INCOME ESTIMATES

1. **Indicating level of Economics activity-** National income accounts provide a comprehensive measure of the level of **economic activity and index of economic growth** of an economy
2. **Distribution pattern** of national income determines the pattern of demand for goods and services and enables businesses to forecast the future demand for their products.
3. **Economic welfare** depends to a considerable degree on the magnitude and distribution of national income.
4. The estimates of national income show the **composition and structure** of national income in terms of different sectors of the economy.
5. Combined with financial and monetary data, national income data provide a guide to make policies for **growth, inflation, economic forecasting** and to **make projections** about the future development trends of the economy
6. National income estimates throw light on income distribution and the possible **inequality in the distribution** among different categories of income earners
7. **International comparisons** in respect of incomes and living standards assist in determining eligibility for loans, and or other funds or conditions on which such loans, and/ or funds are made available.
8. The national income data are also useful to determine the share of **nation's contributions to various international bodies**.

CIRCULAR FLOW OF INCOME

Circular flow of income refers to the **continuous circulation of production, income generation and expenditure** involving different sectors of the economy. There are three different interlinked phases in a circular flow of income, namely: production, distribution and disposition.

1. **In Production phase-** firms produce goods and services with the help of factor services.
2. **In Income or distribution phase,** the flow of factor incomes in the form of rent, wages, interest and profits from firms to the households occurs
3. **In Expenditure or disposition phase**, the income received by different factors of production is spent on consumption of goods and services and investment goods. This expenditure leads to further production of goods and services and sustains the circular flow.



- **This circular flow of goods income is defined as flow of payments and receipts for goods and service and factor service between different sectors of economy.**
- **This flow is called circular because it has no specific beginning or end and continues indefinitely.**

Circular flow of income can be viewed from two different angles-

1. ***What is Real Flow?*** Real flow consists of flow of factor service and flow of goods and services among different sector of economy- ***Yellow Arrows***
2. ***What is Money flow?*** Money flow consists of flow of money for factor services in form of wages, rent, dividend (Green arrow) and money expenditure incurred on purchase of goods and services **(Blue arrow)**

ECONOMIC SECTORS OF AN ECONOMY

1. Household Sector:

1. Household sector owns factors of production. **(land, Labour and capital)**
2. They provide their service to producer for **return in form of income**.
3. The income earned is then **expended to purchase goods and services** from producers.
4. Household **pays taxes to government** and also saves part of their income

2. Business Sectors/ Firm/ Producer:

1. They **hire factors of productions** to produce goods and services and then sell them to household, government and other countries.
2. They **pay income to household** for factors of productions
3. Business sectors comprise of both private and govt. enterprises.

3. Government Sector:
1. Government earns **income in form of taxes** levied on households, Business sectors and also on import and export. (Direct tax and indirect tax)
2. It **buys factor services** from households and goods and services from producers.
3. It **uses this income for providing essential services** to community and for governance.

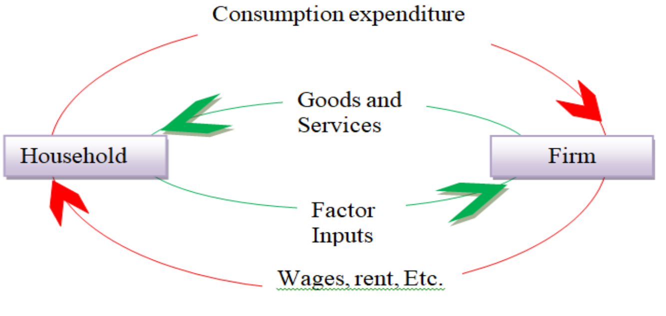
4. Foreign Sector/ Rest of the World
1. In this modern era countries **exports goods and also imports goods** from other countries.
2. The **factor services move across the border** of one country and also firm may hire factor service from other country too.

Models of circular flow of Economy

2 Sector	3 Sector	4 Sector
Household Sector Firm Sector	Household Sector Firm Sector Government	Household Sector Firm Sector Government Rest of the world
	Closed Economy	Open economy

Two Sector Model without savings- Refer Diagram below

Assumptions:
1. There are **only two sectors** in an economy. **Households and the firms**.
2. **No savings** is made by either by Household or by Firm.
3. Households **spend entire income** on goods and services and **firm distributes entire proceeds** in the form of factor payments.



Circular flow in two sector economy

Explanation:
1. The household sector supplies factor service to the firms and firm hires factor services from households.
2. The firm produces Goods and services and sells entire output to households.
3. A household receives Factor income from Firms and Spend entire income on consumption of goods and services.
4. There is no savings done by Households and firms
5. The Factor inputs flows from Households to firm which represents **Real flow**. In return money flows from firms to households representing **Money flow**. These two flows are in opposite direction.
6. The Goods and services produced by firm flows to households which is **Real flow**. While the consumption expenditure which flows from household to firm represent **Money flow**. Again, these two flows are in opposite direction.

In this two-sector model without investment it is assumed that all the income earned by the Household is spent on buying **Consumer Goods** from the firm, while all the proceed are distributed as factor payments to households. Thus, the equilibrium will be achieved.

In other words, there is **no leakage in income** and the below mentioned equations hold good-

1. Total production of Goods and services by firm= Total consumption of goods and services by households.
2. Factor Income of household= Total factor payments.
3. Income of the firm= Expenditure of the households.
4. Real flow = Money flow

Two Sector Model with Savings and Investment

In Real world it is difficult to imagine that entire income earned by household is expensed and nothing is saved. Some part of the money is saved for future expenditures like education, marriage and other contingencies and this is called as **savings.** Similarly, even firms save the profit for future growth and expansions.

Assumptions

1. *We have assumed that* ***savings is done only by Households and not firms.***
2. *All the* ***savings*** *made by the households are* ***invested in capital Market****.*

Savings, Leakage, reduction in flow of income and investment

1. Now, as some part of income is saved by the household and only remaining part of the income is expended by the household, the flow of money in this circular flow reduces.
2. This represents a sort of **withdrawal or leakage of expenditure** from the circular flow of income. Thus, the ***money which is withdrawn from flow of income is called as Leakage or withdrawal.***
3. This withdrawal reduces the flow of income from the economy and forces the **firm to reduce the production** and produce only consumer goods and not capital goods.
4. This **savings is then invested in Capital Market** (example bank, financial institutions).
5. Now the firms borrow from the capital market to compensate the deficit caused by the savings. This is called as **injection**
6. This encourages the economy and firms **produces capital goods in addition to consumer goods.** This income does not arise from the expenditure of the household, rather is over and above the income arising from household expenditure. This additional income increases level of income in an economy.
7. Now the part of income (expenditure) flows from household to the firm in form of consumption expenditure and balance part flows in the form of investment with the help of intermediaries.
8. Savings by household is indicated by S while the investment is indicated by I. At equilibrium Savings of the household = investment of the firm i.e.

Consumption expenditure
Goods and Services
Household
S
Capital Market
I
Firm
Factor Inputs
Wages, rent, Etc.

Circular flow in two sector economy with investment

S=I

Savings made by the households and the investments may not be equal in all the time. There are three possible situations mentioned below-

i. If Savings= Investment, equilibrium is achieved
ii. Is Savings > Investment, the flow of income declines
iii. Is Savings < Investment, the flow of income rises

Three Sector Model of circular flow of income

The three-sector model consists of Households, Firms and Government.

Household sectors:

1. Household sectors provide factor services to **Firm and Government**. For the factor service provided the households receives **Factor income** from the firm and Government.
2. Part of the income is spent by the households in **consumption of Goods and services** and some part is **saved** and some part is **paid to government in the form of taxes**.
3. As mentioned earlier, the **saving** acts as leakage of money form circular flow of income **taxes paid to government** also acts as **leakage to the circular flow.**
4. The Household also receives **transfer payments** from the government which acts as an **injection** to circular flow of money.

Government sector:

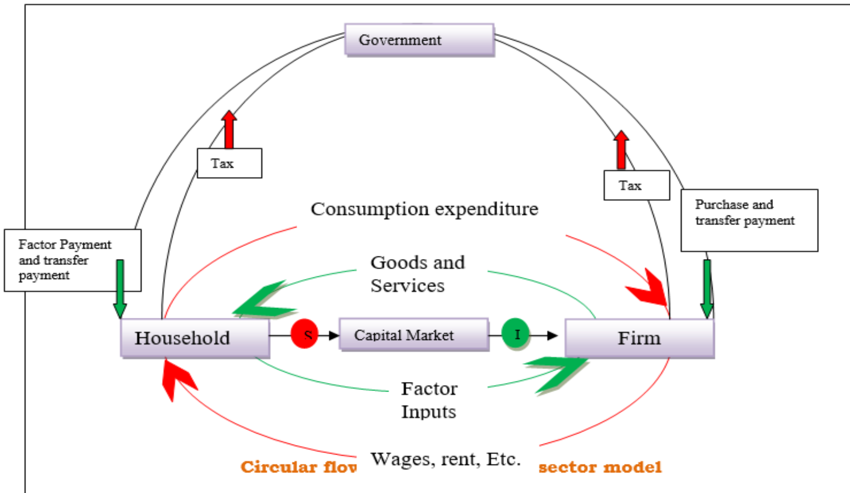
1. Government **collects taxes (Direct and indirect)** from Households and Firms. Taxes collected from the households and the firm acts as **leakage to circular flow of income** as it reduces the flow of money form the economy.
2. Government makes **transfer payments to households** (injection) and provided subsides to them which acts as an injection to an economy
3. Government makes **payment for Goods and services for purchased** by them, which acts as an injection to an economy.
4. Government also **pays to the households for the factor services** received by them

Firms:

1. Business sectors **hire the factor of production** for the purpose of production and make factor payments for the factor services received by them.
2. The Business **receives income form the consumption of Households and Government**
3. Also, the **taxes are paid by business sector** to the government. This acts as leakage to circular flow of income.
4. The business sector receives subsidies and transfer payment form the Government which is an injection to circular flow of income.
5. Also, the **savings of the households are channelized by financial institutions to** meet the investment needs of the firms. This is an injection to circular flow of income.

In-short taxes constitutes as leakage of income from circular flow of income. On the other hand, government expenditures and transfer payments are an injection in the flow

1. The equilibrium condition of circular flow of income in 3 sector economy model is: S+T = I+G.
2. If (S+T)> (I+G)- Decline in flow of income
3. If (S+T)< (I+G)- Increase in flow of income



Four Sector Model of circular flow of income

It is also called as open economy model as it is engaged in international operations too.

Explanation:

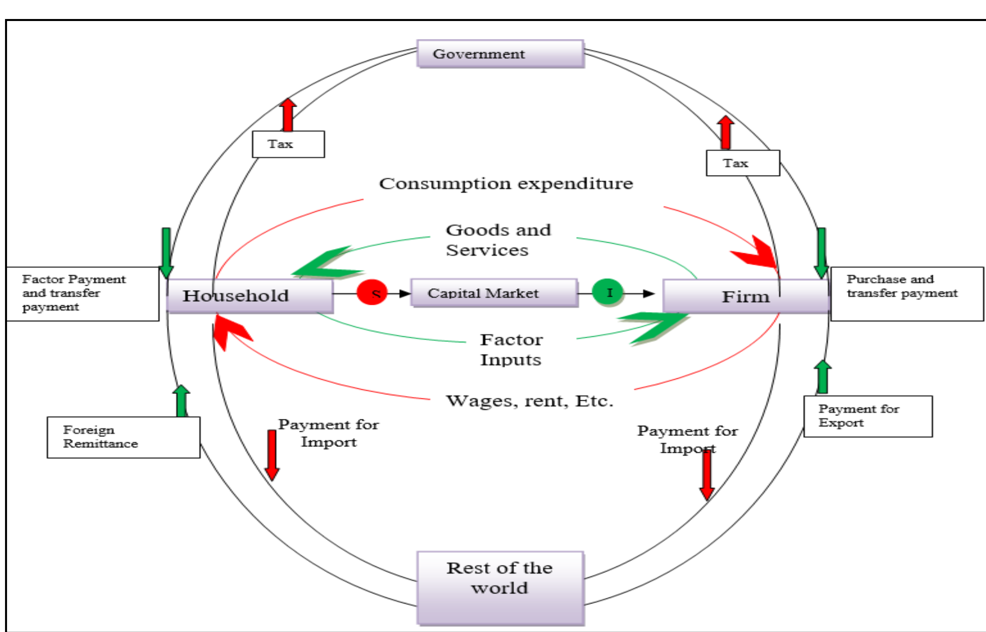
The households imports goods and services and make payment to foreign sector. Whereas, if the household sector provides factor service to the foreign sector they receives foreign remittance. (Example: Indian people working abroad and remitting income to their families in India).

Similarly, the business sectors exports goods and services to foreign sector and receives remittance and vice versa.

Export is denoted by **X** while Import is denoted by **M.**

Thus, it can be said that X constitutes injection while M creates leakage into circular flow of income.

1. At equilibrium = S+T+M = I+G+X
2. If S+T+M > I+G+X, there is decline in flow of income.
3. If S+T+M < I+G+X, there is increase in flow of income



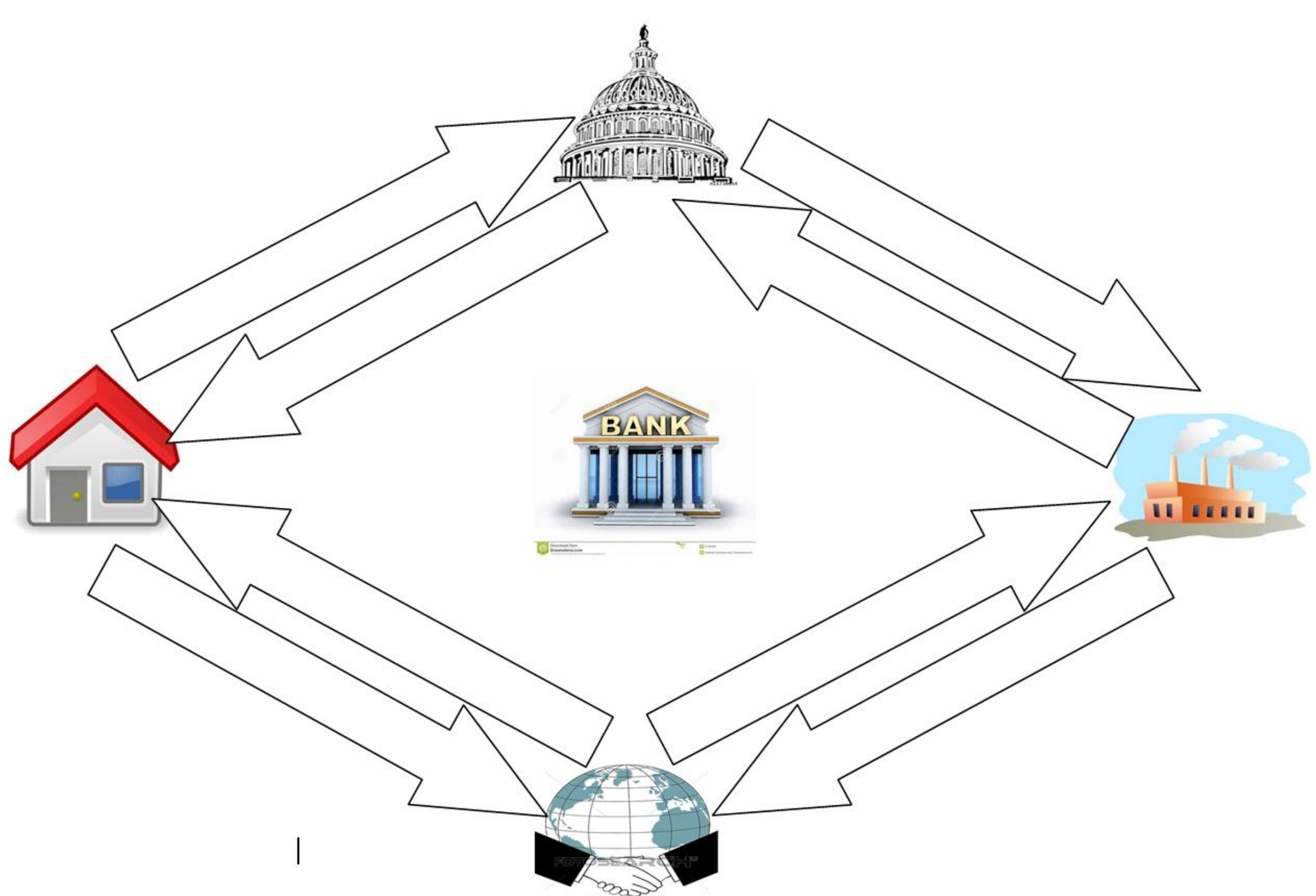
Importance of Circular Flow of Income

1. **Easy to view** the entire system as circular flow of income.
2. Circular flow of income pinpoints the condition of **macroeconomics equilibrium**.
3. It gives an idea as to **how different sectors of economy interacts**
4. It shows how different sectors of economy (Household sector, Business sector, Government and Rest of the world) are **interdependent and are interrelated.**
5. It helps in determining **size of income**. We can estimate national income with the help of output, income and expenditure phases of circular flow of income

Distinction between three and four sector Economy model:

Basis	Three Sector	Four Sector
Components	Household consumption (C) Business investment demand (I) Govt. Demand of Goods and services (G)	Household consumption (C) Business investment demand (I) Govt. Demand of Goods and services (G) Foreign sector (x-m)
Equation	C+I+G	C+I+G+(x-m)
Effect of GDP and NI	GDP at factor cost= National Income, provided for depreciation	GDP at factor cost= National Income, provided for depreciation and NFIA
New addition	Government sector	Govt. and Foreign sector
Effect	Presence of Govt. Adds injection to economy by spending and leakage in form of taxes.	Apart from Govt. sector. Import acts as leakage while exports act as injection.

Summary



Unit 2- National Income Aggregates

Domestic Product and National Product (Domestic income and National Income)

Particulars	Domestic Products	National Products
Meaning	Domestic Product is defined as money value of Final Goods and service produced by **all the enterprises** located **within domestic territory** of a country during a year	National Product is defined as money value of Final Goods and service produced by **Normal Resident of a country** whether operating within **domestic territory of a country or outside.**
Basis of different-iation	Domestic product is calculated considering **geography or domestic territory** of the country and can be addressed with the question of **where** the income is generated	National Product is calculated considering who is earning the income. If it is earned by **national of the country** then it shall be included in national Product. It can be addressed with the question of **who** generates the income.
Calculation	It includes the goods and services produced **by both, nationals of the country as well as foreign national** working in the country	It includes the income earned by **nationals of the country** even if located outside the country and similarly **excludes the income earned by foreign nationals** in the country
Formula	Domestic income is sum total of G&S produced within the country	National income is Sum of **Domestic income + Net factor income from abroad**

Net factor Income Earned from Abroad

Net factor Income Earned from Abroad or **NFIA** is the difference between the factor income received by normal resident of the country from rest of the world for rendering factor services abroad (implies that transfer payments are not to be included) and the factor income accruing to rest of the world for the factor services rendered by them in this country.

National Product at Market Price and National Product at Factor Cost

1) Factor cost refers to **factor payment made by the business to the owners of factor of production for the factor services rendered by them**.
2) Market prices the price at which the goods and services are available in the market.
3) The difference in market price arises because of **indirect taxes and subsidies**. This is known as **Net Indirect tax.**

National product at Market price = National Product at factor cost + Indirect tax*- Subsidies

or

National product at Market price = National Product at factor cost + Net Indirect tax*

Example- Let us say that the cost of cooking gas Cylinder at the factor cost is 550 Rs. Now the taxes applied on this is 20% on factor cost. Also, to grant relief to poor subsidy is granted which amounts to 300 Rs. What will be the National Product at Market Price?

Gross Product and Net Product

1. Both, National Product and Domestic Product can be measured at Gross value or Net value.
2. The difference between Gross and Net arises on account of depreciation.
3. **Depreciation is charge for using fixed assets**.
4. In any production process where plant and machinery is used for production it is prone to wear and tear and with the passage of time the fixed assets gets consumed this is known as depreciation. It is prudent to provide depreciation to incorporate the cost of fixed asset.

Thus,

Net domestic Product = Gross domestic Product – Depreciation

Net national Product = Gross national Product – Depreciation

Summary of above three points

1. *National Income = Domestic Income + NFIA*
2. *Net domestic Product = Gross domestic Product – Depreciation*
3. *Net national Product = Gross national Product - Depreciation*
4. *National product at Market price = National Product at factor cost + Net Indirect tax*

National Income Aggregates:	
Gross Domestic Product at Market Price GDP^{MP}	GDP at Market price is the value of all final goods and services at **their market price** produced within the **domestic territory** of a country by normal residents, whether nationals or non- nationals, **inclusive of depreciation** during a year **Analysis:** 1. Being Gross it includes Depreciation 2. Being domestic it includes all the goods and services produced within country either by nationals or non- nationals. 3. At Market price implies that apart from factor cost it included Net Indirect tax

Gross National Product at Market Price GNP^{MP}	GNP at Market price is defined as money value of all final goods and services at **their market** price **produced by normal resident** of a country, **inclusive of depreciation** during a year. **Analysis:** 1. Being Gross it includes Depreciation 2. Being National it includes income earned by the national of a country (Domestic + NFIA). 3. At Market price implies that apart from factor cost it included Net Indirect tax **GDP_{MP} = GDP_{FC} +_____________.**
Net Domestic Product at Market Price NDP^{MP}	NDP at Market price is the value of all final goods and services at **their market price** produced within the **domestic territory** of a country by normal residents, whether nationals or non- nationals, **net of depreciation** during a year **Analysis:** 1. Being net it excludes Depreciation 2. Being domestic it includes all the goods and services produced within country either by nationals or non- nationals. 3. At Market price implies that apart from factor cost it included Net Indirect tax GDP_{MP} = NDP_{MP} +_____________.
Net National Product at Market Price NNP^{MP}	NNP at Market price is defined as money value of all final goods and services at **their market price produced by normal resident** of a country, **net of depreciation** during a year **Analysis** 1. Being net it excludes Depreciation 2. Being National it includes income earned by the national of a country (Domestic + NFIA). 3. At Market price implies that apart from factor cost it included Net Indirect tax **GNP_{MP} = NNP_{MP} +_____________.**
Gross Domestic product at Factor cost GDP^{FC}	Gross Domestic Product at factor cost is **the sum total of earnings received by factors of productions** in terms of wages, rent, interest and profits, **within the domestic territory** of the country, **inclusive of depreciation.** Analysis 1. Being Gross it includes Depreciation 2. Being domestic it includes all the goods and services produced within country either by nationals or non- nationals. 3. At Factor cost implies that it includes only factor payment and no adjustment for Net Indirect tax **GDP_{FC} = GDP_{MP} -_____________.**
Gross National product at Factor cost	Gross National Product at factor cost is the **sum total of earnings received by factors of productions** in terms of wages, rent, interest and profits by the normal residents of the country, **inclusive of depreciation.** Analysis 1. Being Gross it includes Depreciation

GNP^{FC}	2. Being National it includes income earned by the national of a country (Domestic + NFIA). 3. At Factor cost implies that it includes only factor payment and no adjustment for Net Indirect tax **GNP_{FC} = GDP_{FC} -______________.**
Net Domestic product at Factor cost NDP^{FC}	Net Domestic Product at factor cost is the **sum total of earnings received by factors of productions** in terms of wages, rent, interest and profits, **within the domestic territory** of the country, **net of depreciation.** Analysis 1. Being Net it includes Depreciation 2. Being domestic it includes all the goods and services produced within country either by nationals or non- nationals. 3. At Factor cost implies that it includes only factor payment and no adjustment for Net Indirect tax **NDP_{FC} = GDP_{FC} -______________.**
Net National product at Factor cost NNP^{FC}	**NNP at Factor cost is also called as National Income** Net National Product at factor cost is the **sum total of earnings received by factors of productions** in terms of wages, rent, interest and profits by the normal residents of the country, **net of depreciation.** Analysis 4. Being Net it excludes Depreciation 5. Being National it includes income earned by the national of a country (Domestic + NFIA). 6. At Factor cost implies that it includes only factor payment and no adjustment for Net Indirect tax GNP_{FC} = NNP_{FC} -______________.

Why NNP at factor cost is better measure of National Income than NNP at Market Price?

Answer: *NNP at Market price is affected by factor called as Net indirect tax. If there is change in tax rate and subsidy then NNP at market price figure will change accordingly* ***without*** *actual increase in Factor cost. Also, different countries have different tax rate and thus for* ***international comparison*** *of relative income level.*

Transfer Payment and Disposable Income

1) Transfer payments are unilateral payments for which no productive services are rendered in return in the ***current year.***
2) The recipient of this transfer payment **does not make any contribution to current production** in return for these payments
3) E.g Pension is given to a person in C.Y for rendering services in past, Unemployment allowance.

There are two types of transfer payments Viz. Current transfer and Capital transfer

∂ **Current transfer** refers to the transfer made out of current income of payer and is added to current income of payee.

∂ **Capital transfer** refers to transfer made out of the wealth of the payer and added to wealth of the receiver. (not in our syllabus).

<table>
<tr><th colspan="2">Types of Income:</th></tr>
<tr><td>National Income</td><td>Net national product at factor cost</td></tr>
<tr><td>Disposable income</td><td>Income available for disposable and it includes transfer payments.

Example, Income may be 10,000 but one may also receive transfer payment which will increase the money received by him to the extent of transfer payment say 2000. Therefore, Income is 10000 while Disposable income is 12000
Thus,
Disposable income= Income + Net Transfer payment**
Disposable income may be more or less depending upon whether Net transfer payment is positive or negative</td></tr>
<tr><td>National Disposable Income</td><td>National Disposable income is the sum total of National Income at Market price and net of Current transfer received from rest of the world

Explanation
• It is the income which is available for disposable for a nation as a whole
• Apart from the national income, it includes transfer payment made to rest of the world by nation or received by rest of the world.
• It includes gifts, donations, grants, relief funds, etc.
• The transfer received and transfer made is collectively known as net transfer, which may be positive or negative.
• While the transfer from rest of the world is included, it does not take into account intra transfer between households, government and business sectors. This is because income of one sector will increase on such transfer, but same amount will be deducted from income of payer, leaving zero impact.

Calculation and Formula
• There are two aggregates to National Disposable income
1. Gross National Disposable Income (GNDI)
2. Gross National Disposable Income (NNDI)
• GNDI and NNDI differ to the extent of Depreciation.
Formula
GNDI = GNP_{MP} + Net transfer Payments received from rest of the world
NNDI = NNP_{MP} + Net transfer Payments received from rest of the world
NNDI = GNP_{MP} + Net transfer Payments received from rest of the world-depreciation</td></tr>
<tr><td>Disposable income of Private sectors</td><td>There are three disposable income aggregates, namely-
1. Private Income
2. Personal Income
3. Personal Disposable income</td></tr>
</table>

Private Income

1. Private income is the income earned by both, **household and Business sectors** including the **current transfer payment** received from **Government and rest of the world.**
2. It is the sum of factor income from all sources+ transfer payment from Govt. and rest of the world.
3. It seeks to explain the portion of national income held by government and private sector

Private income is the pre-tax income of private sector.

To arrive at the Personal Income following adjustments need to be made.

	NNP_{FC}	10000
Less	Income from property and entrepreneurship accruing to govt. commercial enterprises and admin department. Ex. Air India, Indian railway, BHEL, SAIL	(350)
Less	Savings of non- Departmental enterprises of govt.	(30)
Add	Interest on national debt *	20
Add	Net Current Transfer payment received from Govt. dept.**	120
Add	Net transfer payment received from rest of the world**	70
	Private Income	830

Personal incomes

It is the sum total of all current income actually received by household from all sources. It includes the sum earned by the household in the form of factor income including transfer payments.

	Private Income	830
Less	Undistributed profits	30
Less	Corporate taxation	70
	Personal Income	730

Usefulness of Personal Income.

- It gives estimate of purchasing power in hands of public.
- It helps in understanding distribution of income and tax burden
- Helps govt. in designing tax policies

Personal disposable incomes

It represents the amount of income which is available for disposable (**Savings and expenditure**) by household the way they desire.

	Personal Income	730
Less	Miscellaneous receipts of Govt. department. Fines, fees etc.	30
Less	Personal taxation	60
	Personal Income	640

Per Capita Income

It is the average income of normal resident of a country in a particular year

$$\text{Per capita income} = \frac{NNP_{FC}}{\text{Population}}$$

Summary
GNDI = GDP_{MP} + Net transfer payment received from rest of the world
NNDI = NDP_{MP} + Net transfer payment received from rest of the world
Private Income = NNP_{FC} - Income from property and entrepreneurship accruing to govt. commercial enterprises and admin department- Savings of non- Departmental enterprises of government +Interest on national debt +Net Current Transfer payment received from Govt. dept +Net transfer payment received from rest of the world
Personal Income = Private Income – Undistributed profits- Corporate taxes
Personal disposable income = Personal income- Personal taxes- Miscellaneous receipts of Govt. department.

***Interest that Govt. pays on National debt**: Sometimes govt. borrows fund from private institution and pays the interest on the same. The interest shall be included in factor payment by it is argued that the monies are utilized for welfare purpose and thus shall be treated as Transfer payment.

**The private sector receives transfer payment both from Govt. and rest of the world. Reverse is also true in many cases.

Real GDP vs Nominal GDP

	Nominal GDP	Real GDP
Also known as	GDP at Current price	GDP at Constant price
Meaning	GDP at Current price is the value of all final goods and services produced **within** the domestic territory of a country by normal residents, whether nationals or non- nationals, inclusive of depreciation during a year at **market price prevailing in that year**	GDP at Constant price is the value of all final goods and services produced within the domestic territory of a country by normal residents, whether nationals or non-nationals, inclusive of depreciation during a year at **market price prevailing in base year**
		GDP at constant price = $\frac{\text{GDP at Current price}}{\text{Price index of current year}}$ x 100

Question: Why GDP expressed at constant price is known as real GDP?

Answer: *The GPD is the value derived by multiplying the price of product* **x** *number of units produced.*

The GDP may change on account of change in either of the factor. ***Thus, GDP at current prices may not reflect REAL Domestic Output*** *This is because the GDP may rise because of rise in price of goods and service without the actual increase in production. This may lead to misleading figures. On the other hand, GDP at Constant price is affected only by change in quantities of final goods and services. Therefore, if GDP is expressed at constant price it takes price of base year and thus the change is only on account of change in production.*

The price index of base year is taken as 100

Limitation of National Income

1. **Income Distribution:** Increase in National income and per capita income is sign of Economic welfare. However, the distribution of income also plays an important role in this regard. The relatively inequality in distribution of income **implies that the gap between rich and poor is widening** while the increase in per capita income has not benefitted the society as a whole.
2. Increase in GDP is taken as sign of economic welfare but if the increase in GDP is on account of **long working hours, Employment of child labour, and polluted working environment,** such increase in GDP is not the real sign of welfare.
3. '**How much is produced'** determines GDP. It does not reflect '**what is produced'**. Thus if the government is producing more weapons, guns and spending more on National and state security GDP will rise but the welfare is ignored.
4. If more of capital goods are produced the GDP will rise but the welfare may not increase in same manner.
5. **Exclusion of Non-Market Transaction-** Some of the non-market transaction increases welfare but does not contribute to GDP. Such as providing music class to society children for fun and other similar activity.
6. **Exclusion of leisure**- While the Leisure adds to Welfare it is not counted for GDP and hence GDP increase may call for long working hours and leisure may be ignored

Explain the conceptual difficulties or challenges in measurement of national Income

The conceptual difficulties or challenges in measurement of national Income are:

1. Lack of an agreed definition of National Income
2. Non-availability of accurate distinction between final and Intermediate goods
3. Issue of transfer payments
4. Service of durable goods
5. Difficulty of incorporating distribution of Income
6. Valuation of New goods at constant price
7. Valuation of Government services
8. Inadequacy of data
9. Reliability of available data
10. Presence of Non- Monetize sector
11. Production for self-consumption

Distinguish between Non-economic activities and economic activities

1. Economic welfare is the utility/ satisfaction derived from use of goods and services that can be purchased with money. Therefore, increase in national income leads to economic welfare. It can be measured by measuring increase in National income and per capita income.
2. Non-economic activities are those which produce goods and services but are not exchanged in a market transaction so that do not command any market value.

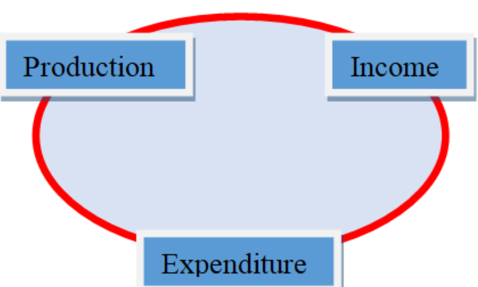
Unit 3- Measurement of National Income

Methods of Measuring National Income

1. National income accounts provide a **comprehensive, conceptual and accounting framework** for analyzing and evaluating the short-run performance of an economy.
2. The task to measure National Income is undertaken by **Central Statistical Organization (CSO)**, a department of Ministry of Planning and Programme implementation.
3. National Income Accounting was pioneered by the Nobel prize-winning economists **Simon Kuznets and Richard Stone**

There are three ways to measure National Income

1. **Product method or Value-added method**- Flow of Goods and services
2. **Income Method**- Flow of income generated
3. **Expenditure Method**- Flow of Expenditure on Goods and services



All the methods mentioned above give same result. Different methods are used to calculate National income depending upon data available and sector into consideration.

Explanation: The factor of production gives factor services to the firms and in return to services rendered they receives factor payment **"Income"**. This income is then **"Expended"** by the factor of production to buy goods and
Services. This in turns leads to **"production".**

Net product or Value-Added Method

Meaning	**National income by value added method is the sum total of net value added at factor cost across all producing units of the economy less intermediate purchases from all other industries.**
Steps 1	Identifying the producing enterprises and classifying them into different sectors according to the nature of their activities **(i)** **Primary sector-** production units which produces goods and commodities by **exploiting natural resources**. Examples- farming, Mining, Fishing, etc. **(ii)** **Secondary sector**- This sector transforms one for of commodity into other form such as **manufacturing** **(iii)** **Tertiary sector or service sector**- Provides services which are **intangible in nature.**
Step 2	Estimating the gross value added (GVA **MP**) by each producing enterprise. Gross value added (GVA MP) = Gross Value of production – value of Purchase = Value of output – Intermediate consumption = (Sales + change in stock) –Intermediate consumption. This will Give us GDPMP
Step 3	**Conversion:** • GDP_{MP}- depreciation= NDP_{MP} • NDP_{MP}- Net indirect tax = NDP_{FC} • NDP_{FC}+ NFIA= NNP_{FC}

Inclusion and exclusions	**Precaution in Estimation of National Income by Value-added Method-** 1. **Production for self- consumption**- For example the vegetation grown in backyard of house shall also be included in computation of production at ***imputed cost***. 2. **Own account production of fixed assets** by government, enterprises and households- Such as building built by business firm for own use. 3. **Imputed rent of owner-occupied houses**- Thus, value of Owner-occupied houses shall also be calculated on Suitable basis. 4. **Service of House wives** shall not be included in computation of National Income. 5. **Sale and purchase of existing commodities or second-hand goods shall not be included. However, the brokerage services** relation to the same shall be included. 6. **Sale and purchase of Share and Bonds** are excluded as they represent transfer of purchasing power only.
Difficulties or problem	1. While calculation NI, it is difficult to ascertain whether the product is **final product or intermediate product**. Example is Milk. 2. In the country with vast landmass, unincorporated sectors, etc. it becomes difficult to rely data. **The problem is about reliability and completeness of data.** 3. Measurement of **depreciation** is also a difficult task. 4. The change in inventory (Closing- Opening) is added for calculation if National Income. The **difficulty is in valuation of inventory.**

Income Method/ Factor Payment Method/ Distributed Share Method

Meaning	**National income is calculated by summation of factor incomes paid out by all production units within the domestic territory of a country as wages and salaries, rent, interest, and profit.**
Steps 1	Classify the income into appropriate income categories namely, 1. Labour Income or Compensation to employees 2. Capital or Property income or Operating surplus 3. Mixed Income of self employed This will give NDP^{FC}
Step 2	All the three above mentioned incomes are added to arrive at Net Domestic factor income
Step 3	The above exercise will give NDP_{FC}. The adjustment of NFIA will give National Income
Labour Income	➢ This is the ***compensation paid to the labour/ employee*** for the service rendered by them. ➢ It is the payment made by the producer to employees or labour, for the services rendered by them, in cash, kind and social security benefits.

Included	Excluded
Salaries and wages in cash including Bonus, DA, HRA	
Current year pension provision shall be considered.	Old age pension shall not be considered while calculating Labour income as it is a transfer payment
Travelling allowance shall be included if it is for travel form office to home and home to work	TA shall be excluded if it is for business work or on reimbursement basis.
Contribution of employer to social	Contribution of employee to social

	security fund shall be added. E.g. Provident fund	security fund shall not be added as it is already part of salary.
	Commission paid to sales staff	Interest free loan given to employee
	Payment in kind- Rent free accommodation, Free Meal coupon	Old age pension
	LIC premium paid by employer	Income tax of employee

Operating Surplus

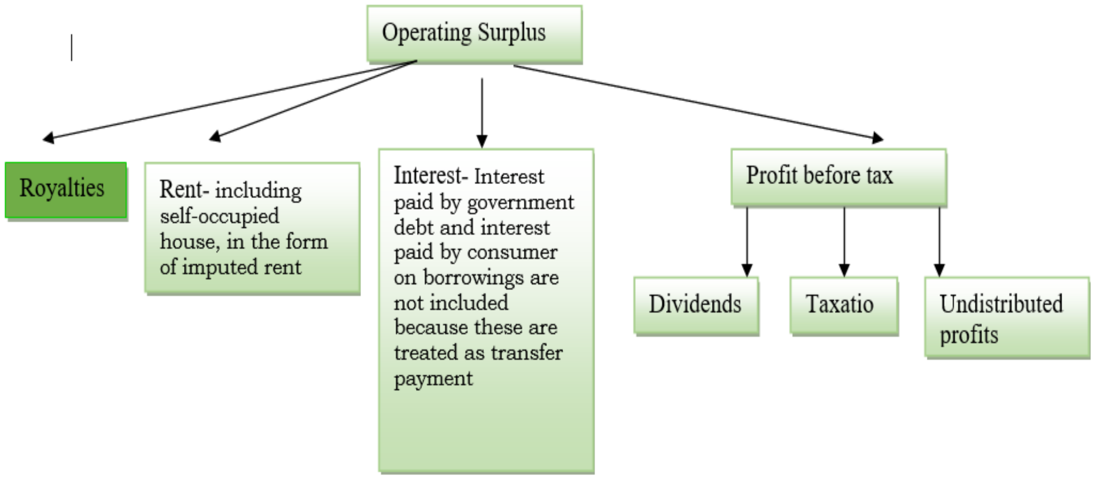
It is the income earned from **ownership and control of Capital**. Therefore, it is also known as income from **property** and **entrepreneurship.**

It includes

- Rent- including self-occupied house, in the form of imputed rent
- Interest
- Royalties for
- Profit before tax

Note:

- ✓ If the question mentions about Profit before tax than Undistributed profit, dividend and corporate taxes shall be ignore.
- ✓ If the question does not mention about the profit before tax- add all three
- ✓ If nothing if prefixed to profit, assume it to be PBT
- ✓ Interest paid by government debt and interest paid by consumer on borrowings are not included because these are treated as transfer payment



Mixed Income

- ∂ Mixed income is the income generated by **own account workers** and income of **unincorporated enterprises.**
- ∂ Example of such mixed income are legal service, agriculture, trading, proprietorship, Plumber, carpenter etc.
- ∂ Mixed income contains both components of income namely **capital income and labour income** of those who provides capital and labour service in production process.
- ∂ It is the **composite of both labor income and capital income** and arises in case where it is difficult to differentiate between labour element and capital element I factor of production.

Example of such incomes are own account workers like CA, Lawyer, Shopkeeper etc.

<table>
<tr><td rowspan="7">Inclusion and exclusion</td><td>Include</td><td>Exclude</td></tr>
<tr><td>Imputed rent of self-occupied house by owner of this house</td><td>Transfer payment- Refer earlier part of the chapter</td></tr>
<tr><td>Value of production for self-consumption</td><td>Illegal Income like, smuggling, drug dealing etc.</td></tr>
<tr><td>Imputed value of service provided by owner of production unit</td><td>Interest on loan taken for meeting consumption expenditure- eg. Loan to buy house, loan to buy car, etc.</td></tr>
<tr><td>Interest on loan taken for meeting business needs</td><td>Interest on national debt- refer earlier discussion</td></tr>
<tr><td>Brokerage service in facilitating the transaction of second-hand goods</td><td>Income in respect of second-hand commodities</td></tr>
<tr><td>Income tax and TDS to show gross income</td><td>Income arising from transfer of shares and other securities.</td></tr>
<tr><td>Difficulties</td><td colspan="2">1. It is very difficult to estimate Mixed income in vast country with unincorporated sectors and un-organized sector.
2. Many economists criticize the non-inclusion of interest on national debt in calculation of national Income.
3. The data collected for calculation of NI is highly unreliable and understated.</td></tr>
</table>

Expenditure Method/ Income disposal Method

<table>
<tr><td>Meaning</td><td>In the expenditure approach, national income is the aggregate final expenditure in an economy during an accounting year.

This approach gives GDP at market price.</td></tr>
<tr><td>Explanation:</td><td>Expenditure on final goods and services in the economy is divided into four broad categories, namely
1. Private final consumption expenditure- Consumption expenditure done by households.
2. Investment Expenditure- Investment expenditure done by producers and Government in an economy.
3. Government final consumption expenditure- Consumption expenditure done by government.
4. Net exports- foreign component of expenditure in the form of net exports.</td></tr>
<tr><td>Private Final consumption expenditure

Denoted by C</td><td>The volume of final sales of goods and services to consumer households and nonprofit institutions serving households acquired for consumption (not for use in production) are multiplied by market prices and then summation is done.

It also includes the value of primary products which are produced for own consumption by the households, payments for domestic services which one household renders to another.</td></tr>
<tr><td>Government final</td><td>Government means general government and not the government enterprises</td></tr>
</table>

consumption expenditure **Denoted by G**	Since the collective services provided by the governments such as defense, education, healthcare etc. are not sold in the market, the only way they can be valued in money terms is by adding up the money spent by the government in the production of these services. This total expenditure is treated as consumption expenditure of the government. Government expenditure on pensions, scholarships, unemployment allowance etc. should be excluded because these are transfer payments.
Investment Expenditure **Denoted by I**	Gross domestic fixed capital formation includes final expenditure on machinery and equipment **and own account production of machinery and equipment,** expenditure on construction, expenditure on **changes in inventories,** and expenditure on the acquisition of valuables such as, jewelry and works of art. It comprises of- **1. Gross fixed investment**- Expenditure on machinery and equipment, expenditure on construction, and expenditure on the acquisition of valuables such as, jewelry and works of art. **2. Inventory Investment-** This means change in inventory. **3. Expenditure on residential investment-** Expenditure on purchase or construction of new houses. Own account production of houses, expenditure on major repairs and renovation are to be included in expenditure on residential houses
Net Export **Denoted by** X-M	Net exports are the difference between exports and imports of a country during the accounting year. It can be positive or negative.
Formula	**GDP_{MP} = C+I+G+(X-M)** Therefor National Income Y = C + I +G + (X-M) +NFIA- Depreciation- NIT
Precautions	1. Goods meant for self-consumption shall be added and proper value shall be assigned in that case. 2. Own account production of machinery and equipment shall be added to calculate final expenditure on machinery and equipment. 3. Transfer payments shall be excluded. 4. Expenditure on second-hand goods should be excluded. 5. Expenditure on intermediate products should be excluded.

Question: Why are net exports added when computing national income by expenditure Method?

Answer: There are two main reason why net exports added when computing national income by expenditure Method

1) Export represents foreign spending on domestic goods, Goods and services exported to other countries are produced by producer operating within domestic territory of the country. **Thus, export of good is part of domestic produce.** And therefore, it should be added to measure of production.
2) Expenditure on import is part of aggregate spending by resident of a country, though it a part of domestic product of other country. Hence Import must be subtracted.
3) Thus net export (Export – import is considered in calculation of National Income by Expenditure method.

THE SYSTEM OF REGIONAL ACCOUNTS IN INDIA

1. Regional accounts **provide an integrated database** on the innumerable transactions taking place in the regional economy and help decision making at the regional level.
2. At present, **practically all the states and union territories** of India compute state income estimates and district level estimates.
3. State Income **or Net State Domestic Product (NSDP)** is a measure in monetary terms of the volume of all goods and services produced in the state within a given period of time (generally a year) accounted without duplication.
4. **Per Capita State Income** is obtained by dividing the NSDP (State Income) by the midyear projected population of the state.
5. The state level estimates are prepared by the State Income Units of the respective State Directorates of Economics and Statistics (DESs). **The Central Statistical Organization assists the States** in the preparation of these estimates by rendering advice on conceptual and methodological problems.
6. In the preparation of state income estimates, certain activities such as are railways, communications, banking and insurance and central government administration, that cut across state boundaries, and thus their economic contribution cannot be assigned to any one state directly are known as the **'Supra-regional sectors'** of the economy. The estimates for these supra regional activities are compiled for the economy as a whole and allocated to the states on the basis of relevant indicators.

Unit 4- Keynesian Theory of Income determination

A comprehensive theory to explain Income determination was first put forward by the British economist John **Maynard Keynes** in his masterpiece **'The General Theory of Employment Interest and Money' published in 1936.** The Keynesian theory of income determination is presented in two sector model, three sector model and four sector model:

Equilibrium output occur when the desired amount of output demanded by all the agents in the economy exactly equals the amount produced in a given time period. In other words, an economy is said to be in equilibrium when the production plans of the firms and the expenditure plans of the households match.

Key Words:

Consumption Function	Functional relationship between aggregate consumption expenditure and aggregate disposable income, expressed as *C = f (Y).* shows the level of consumption (C) corresponding to each level of disposable income (Y). The consumption function describes the functional relationship between ***consumption spending and disposable income.***
Saving Function	Income not spent on consumption is saved. Thus, saving function denotes the balance after impact of consumption
Marginal Propensity to consume	The concept of MPC describes the relationship between change in consumption (ΔC) and the change in income (ΔY). The value of the increment to consumer expenditure per unit of increment to income is termed the Marginal Propensity to Consume (MPC). MPC = △ Consumption/ △ Income
Marginal propensity to Save (MPS)	(1 – b) is called (Marginal Propensity to Save) MPS. MPS = △S/ △Y

<table>
<tr><td>Average propensity to consume</td><td>The average propensity to consume is a ratio of consumption defining income consumption relationship. The ratio of total consumption to total income is known as the average propensity to consume (APC)
APC = Total consumption/ Total income</td></tr>
<tr><td></td><td>

Income (Y)	Consumption (C)	APC (C/Y)	MPC (ΔC /ΔY)	MPS (ΔS/ΔY) =(1-MPC)
0	500	500/0 =∞	-	-
1000	1250	1250/1000 = 1.25	750/1000 = 0.75	0.25
2000	2000	2000/2000 = 1.00	750/1000 = 0.75	0.25
3000	2750	2750/3000 = 0.92	750/1000 = 0.75	0.25
6000	5000	5000/6000 = 0.83	1500/2000 = 0.75	0.25
10,000	8000	8000/10,000 = 0.80	3000/4000 = 0.75	0.25

</td></tr>
<tr><td>Autonomous Expenditure</td><td>Autonomous consumption expenditure is the minimum expenditure to sustain life irrespective of size of income, thus it is income inelastic. The expenditure which do not vary with the level of income. They are determined by factors other than income such as business expectations and economic policy. They are generally made by ----- in the public sector with a view to provide public utilities & to make maximum social benefit.</td></tr>
</table>

Keynesian theory of determination of National Income in two Sector Model.

i. According to Keynes equilibrium output will occur when amount of quantity demanded will be equal to quantity produced. i.e. **AD=AS**__________________________________**(1)**

ii. Quantity demanded is also known as Aggregate Demand which consists of two Components:
 a. Aggregate demand for consumer goods (C)
 b. Aggregate demand for Investment goods (I) (it is assumed to be constant)
 AD = C + I____**(2)**

iii. Aggregate Supply refers to Total Money Value of goods & Services produced and supplied in an economy per unit of time.

iv. Value of Aggregate Supply in terms of Money = Quantity Produced x Price.

v. **Value of Aggregate Supply = National Income.**____________________________**(3)**

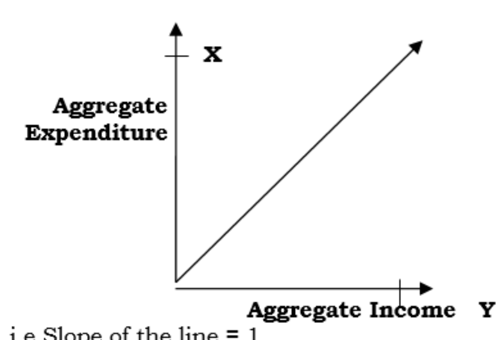
vi. Income (Y) = C+ S ____________________________(4)

vii. Therefore from (1), (2), (3) & (4)

C+S = C+I

viii. **S=I**

ix. The Keynesian Aggregate Supply Schedule or Aggregate Supply curve is drawn on the assumption that Total Income is always spent. Due to this assumption Aggregate Supply Curve is a 45° line in a graph.



x. ***Consumption is a function of Income***. Consumption depends upon income of consumer.

C = a + by

Where,

C= Consumption expenditure

a= +ve constant

b= marginal propensity to consume (MPC)

Y= national income

a is consumption expenditure when income is Zero & a will remain constant. Even if Income is Zero, still there is some consumption.

i.e. C = a, when y = 0 (y is income)

b is that part of income which is spent on consumer goods. 'b' is a constant ratio, it is also called a marginal propensity to consume (MPC)

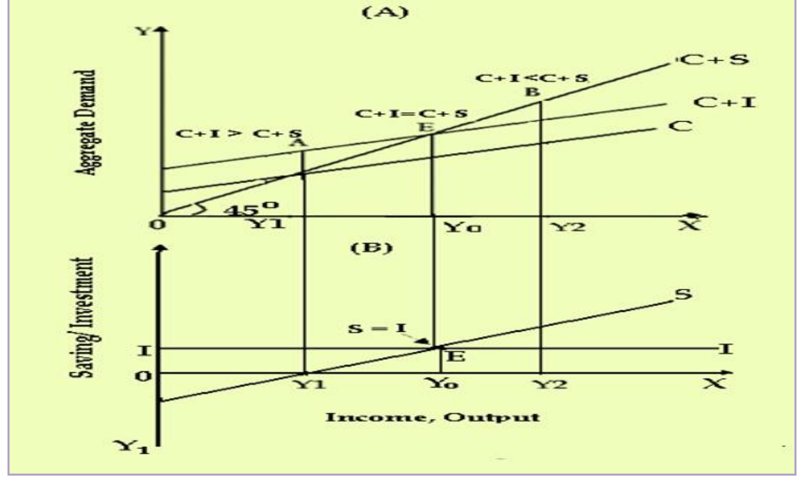
xi. **E.g. C = 50 + 0.5y and I =50**

Determine the equilibrium-

AD Schedule:

Income (y) or Aggregate Supply	C = 50 + 0.5y	I	AD
0	50	50	100
50	75	50	125
100	100	50	150
150	125	50	175
200	**150**	**50**	**200**
250	175	50	225
300	200	50	250

Note: Aggregate Supply is always equal to National Income, in the above table @ 200, AS = AD. This is the Equilibrium Point. This is the Equilibrium National. This is how National Income is calculated in two sector model.



Why any other point cannot be Equilibrium NI?

Case 1: AS > AD i.e C+S > C+I

The firm will not be able to sell its stock & firm will reduce the production and cut down on expenditure, as a result demand for factor of production will decrease, in case of Factor will reduce and thus spending will fall. This process will continue till equilibrium is reached.

Case 2: AS<AD i.e C+S < C+I

Here Demand is greater than supply and hence producer will increase the production leading to higher National income. This will cause upward moment along the line to achieve the equilibrium.

Keynesian theory of determination of National Income in three Sector Model.

i. This model includes **Government** also.

ii. Inclusion of Government brings two more variables-

a. **Government Expenditure -**is an **injection** to the economy and demands more income in the economy.

b. **Taxes** are **leakage** to the economy. Due to taxes income of the individual & firms reduces. Individuals and firms are able to spend less.

iii. **Assumption under this model is that the Government follows a balanced** budget.

∴ **Government Expenditure = Government Revenue.**

There is no fiscal deficit. ∴ All taxes are spent on infra, welfare, admin etc.

iv. **In three sector model equilibrium occurs when-**

AS = AD____**(1)**

Aggregate demand of consumer goods = C

Aggregate demand of Investment goods = I

Aggregate demand of Government = G

∴ **Y = C + S + T** ___________________________________**(2)**

= C + I + G ___________________________________**(3)**

v. Therefore S+T= I+G ______________________________(From 1,2 & 3)

vi. In a sector model those are effect of taxes, consumption will depend on disposable income of consumer.

Disposable Income = y – t

Disposable Income = Yd

∴ Consumption will be- C = a + b (Yd) - (4)

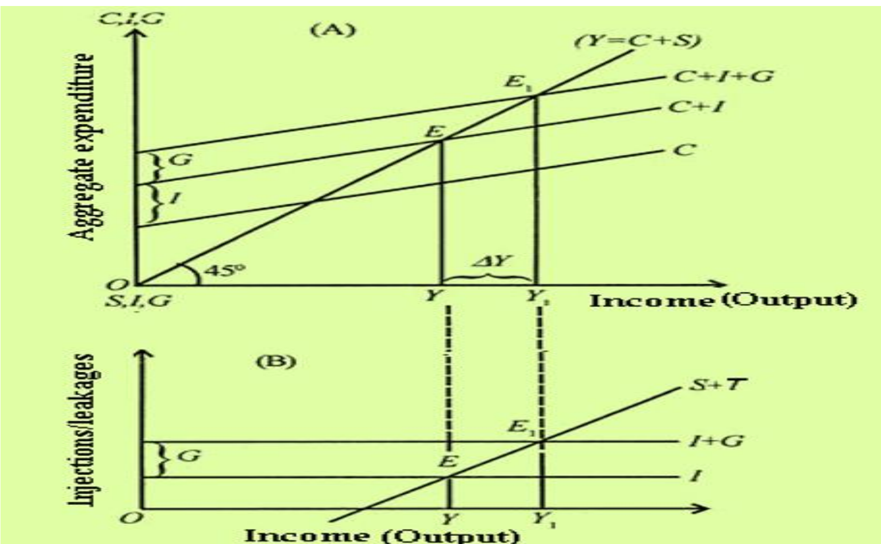
vii. Put the value of C in equation (4)

$$Y = a + b(yd) + I + G$$
$$Y = a + b\,(y - t) + I + G$$
$$Y = a + by - bt + I + G$$
$$Y - by = a - bt + I + G$$
$$Y\,(1 - b) = a - bt + I + G$$

$$\therefore Y = \frac{1}{(1-b)} \times (a - bt + I + G)$$

Let us assume-	Find National income when C= 100+0.5y , I =700, G=150, t= 50%-
C = 100 + 0.75 y, I = 100, G = 50 and t= 50% $Y = \frac{1}{(1-0.75)} \times [100 - (0.75 * 50) + 100 + 50]$ $Y = \frac{1}{0.25} \times (212.5)$ Y = 850 850 is the equilibrium National Income.	

Graphical Representation of three sector model –



Keynesian theory of determination of NI in Four Sector Model.

1. It relates to income determination in an open economy.
2. Foreign Sector gives rise to two variables.
   Export – acts as injection to National Income.
   Imports – acts as leakage to National Income
3. The difference between Export & Imports (x – m) is called **Net Exports.**
4. We will incorporate net exports in our Model.
5. If x > m it is net injection into economy. & If x < m it is leakage into economy & NI will decrease.
6. **Export is treated as autonomous variable** as it is beyond the control of an economy.
7. **In 4 Sector Model, X, I and G are autonomous variables.**
8. Equilibrium output is determined when Aggregate demand = Aggregate supply

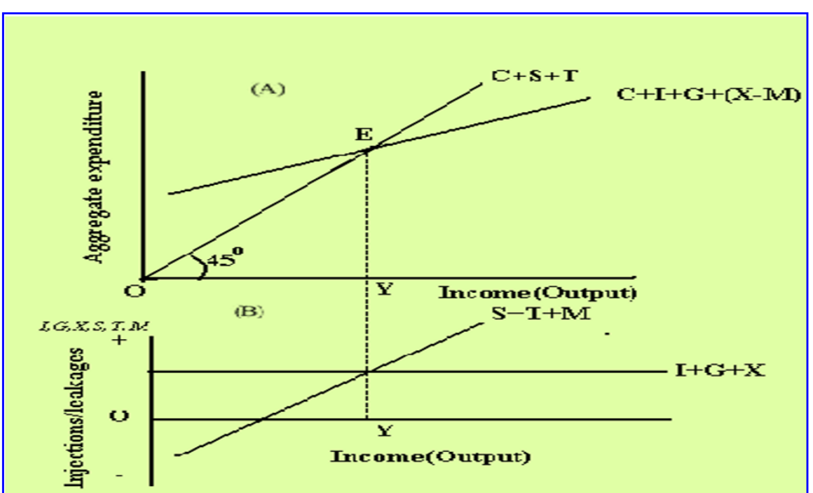
AS = AD

C + S + T = C + I + G + (x – m)

∴ S + T = I + G + (x – m)

OR S + I + m = I + G + x

Graphical Representation of Model –



Investment Multiplier:

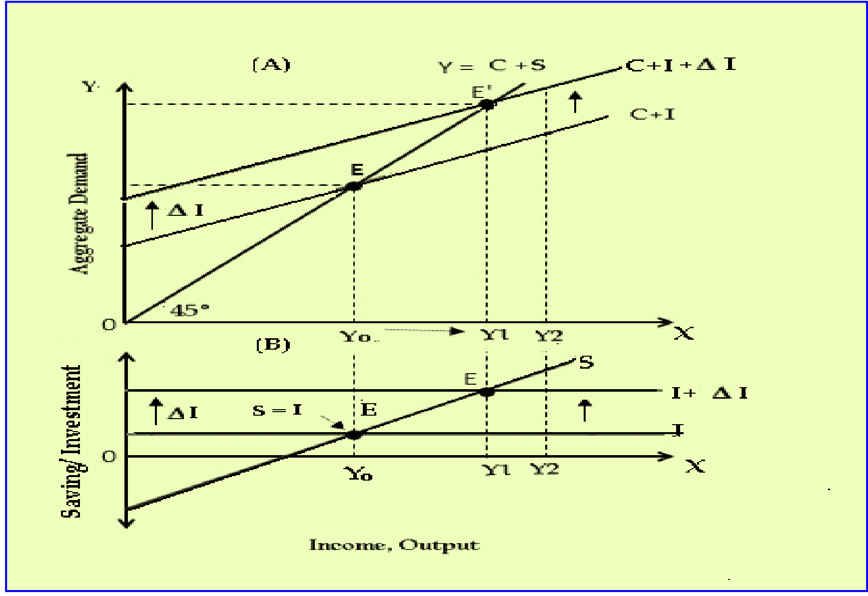
1. The multiplier refers to the **phenomenon whereby a change in an injection of expenditure will lead to a proportionately larger change** (or multiple change) in the level of national income.
2. Multiplier explains how many times the aggregate income increases as a result of an increase in investment.
3. When the level of investment increases by an amount say ∆I, the equilibrium level of income will increase by some multiple amounts, ∆ Y.
4. The ratio of ∆Y to ∆I is called the investment multiplier, k.

   ∆ Y = k ∆I.

   The value of the multiplier is found from the equation k = 1/ (1– MPC).

How does Multiplier work?

1. For example, if a change in investment of Rs. 2000 million causes a change in national income of Rs. 6000 million, then the multiplier is 6000/2000 =3. Thus, multiplier indicates the change in national income for each rupee change in the desired investment.
2. The value 3 in the above example tells us that for every Rs. 1 increase in desired investment expenditure, there will be Rs. 3 increase in equilibrium national income. Multiplier, therefore, expresses the relationship between an initial increment in investment and the resulting increase in aggregate income



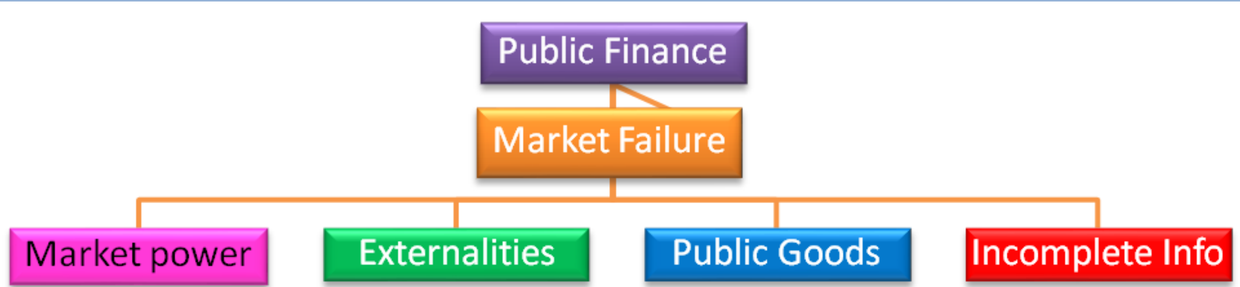
Relationship between Investment Multiplier and Marginal Propensity to consume

The Marginal Propensity to consume is the determinant of Value of multiplier and that there exists direct relationship between MPC and value of multiplier. Higher the MPC, Higher will be the Value of Multiplier, and Vice versa. Maximum Value of Multiple will be Infinite when MPC is 1. We conclude that value of Multiplier is reciprocal of MPS (1-MPC)

Chapter No. 2: Public Finance

Unit 1 – Market Failure

2.1.0 Chapter overview



2.1.1 Market Failure

- The general belief is that markets are amazingly competent in organizing the activities of an economy as they are generally efficient and capable of achieving optimal allocation of resources. However, under certain circumstances, **'market failure'** occurs
- Market failure is a situation in which the free market leads to **misallocation of society's scarce resources** in the sense that there is either **overproduction** or **underproduction** of particular goods and services leading to a less than optimal outcome. Market failures are situations in which a particular market, left to itself, is inefficient.

There are two aspects of Market Failure-

Demand Side Market Failure	Supply side Market Failure
Demand-side market failures are said to occur when the ***demand curves do not take into account the full willingness of consumers to pay*** for a product.	Supply-side market failures happen when ***supply curves do not incorporate the full cost*** of producing the product.
For example, none of us will be willing to pay to view a wayside fountain because we can view it without paying.	For example, a thermal power plant that uses coal may not have to include or pay completely for the costs to the society caused by fumes it discharges into the atmosphere as part of the cost of producing electricity.
Customer don't want to pay	*Cost does not include social cost*

2.1.2 Four major reasons for Market Failure

Market power | Externalities | Public Goods | Incomplete Info

2.1.2 Market Power

Point	Explanation
Meaning	Market power or monopoly power is the ***ability of a firm to profitably raise the market price*** of a good or service over its marginal cost and can charge a price that gives them positive economic profits.
Techniques	1. **Lower output:** Excessive market power causes the single producer or a small number of producers to produce and sell less output than would be produced in a competitive market. *(artificial scarcity)* 2. **Higher Price:** Firms with Market power are Price Makers. They can change a Price that gives them positive Economic Profits i.e. over and above Normal Profits. 3. **Missing Markets:** There may be failure to produce certain goods even if such products and services are wanted by people and are socially desirable (e.g. Pure Public Goods). This problem is called "Non- Existence of Markets" or "Missing Markets"
Conclusion	This is how by keeping price higher and output lower than what is required and sometimes by totally eliminating the goods from the market, Market powers lead to market failure

2.1.3 Externalities

(Kare koi aur bhare koi aur)

Point	Explanation
Meaning and concept	1. **When actions of either Consumers or Producers result in costs or Benefits that do not reflect as part of the Market Price, such costs or Benefits which are not recognized by, and accounted for, by the Market Price are called "Externalities".** 2. An Externality occurs, when a Consumption or Production Activity has an indirect effect on other's consumption or Production activities and such effect are not reflected directly in Market Prices. 3. *The unique feature of an externality is that it is initiated and experienced not through the operation of the price system, but outside the market.*
Working	1. As the originator of the externality imposes costs or benefits on others who are not responsible for initiating the effect, therefore, Externalities are also referred to as '**spillover effects**', '**neighborhood effects**' '**third-party effects**' or '**side-effects**', 2. Since it is outside the price mechanism, it has not been compensated for, or in other words it is uninternalized or *the cost (benefit) of it is not borne (paid) by the parties.*
Consequences of Negative Externalities	Negative externalities impose costs on society that extent beyond the cost of production as originally projected by the producer. Due to negligence of negative externalities, marginal private cost is lower than marginal social cost thus there are high chances of over production and underpricing. Or in other words, in case of negative externalities, the firm has to pay no extra cost for creating externalities, thus these costs are

	not considered while determining equilibrium price & hence equilibrium price is less than the efficient price leading to market failure.

2.1.4 Unidirectional and reciprocal Externalities

Unidirectional Externalities	Reciprocal Externalities
Occurs when Originator imposes costs or Benefits on another (Recipient) and there is no externality imposed by the Recipient back on the Originator.	It occurs when 2 persons impose there is costs or on one another.
If an accountant who is disturbed by loud noise from factory but has not imposed any externality on the workers, then the externality is unidirectional.	workshop creates earsplitting noise and imposes an externality on a baker who produces smoke and disturbs the workers in the workshop

2.1.5 Types of Externalities

Externalities can be **positive** or **negative.**

- **Positive externalities** occur when the action of one party **confers benefits** on another party.
- **Negative externalities** occur when the action of one party **imposes costs** on another party.

The four possible types of externalities are:

1. Negative Production Externalities

Meaning	A negative externality initiated in production which imposes an ***external cost*** on others may be received by another in consumption or in production.
Negative production externality on Consumption	A negative production externality occurs when a factory which produces aluminum discharges untreated waste water into a nearby river and pollutes the water causing health hazards for people who use the water for drinking and bathing.
Negative production externality on production	Pollution of river also affects fish output as there will be less catch for fishermen due to loss of fish resources.
Conclusion	∂ The firm has no incentive to account for the external costs that it imposes on consumers of river water or fishermen when making its production decision. ∂ Also there is no market in which these external costs can be reflected in the price of aluminum.

2. Positive production externalities

Meaning	A positive production externality initiated in production that confers ***external benefits*** on others may be received in production or in consumption.
Positive production externality on Consumption	A positive production externality is received in consumption when an individual raises an attractive garden and the persons walking by enjoy the garden.
Positive production externality on Production	A beekeeper who locates beehives in an orange growing area enhancing the chances of greater production of oranges through increased pollination.

3. Negative consumption externalities

Meaning	Such negative consumption externalities initiated in consumption which produce external costs on others may be received in consumption or in production.
Negative consumption externality on Consumption	Smoking cigarettes in public place causing passive smoking by others, creating litter and diminishing the aesthetic value of the room and playing the radio loudly obstructing one from enjoying a concert.
Negative Consumption externality on production	Excessive consumption of alcohol causing impairment in efficiency for work and production are instances of negative consumption externalities affecting production.

4. Positive consumption externalities

Meaning	A positive consumption externality initiated in consumption that confers external benefits on others may be received in consumption or in production.
Positive consumption externalities on consumption	If people get immunized against contagious diseases, they would confer a social benefit to others as well by preventing others from getting infected.
Positive consumption externalities on Production	Consumption of the services of a health club by the employees of a firm would result in an external benefit to the firm in the form of increased efficiency and productivity.

What are the different types of externalities

Distinguish between Positive and Negative Externalities

Sr. No.	Positive externalities	Negative externalities
1.	Positive externalities occur when the action of one party confers benefits on another party.	Negative externalities occur when the action of one party imposes costs on another party.
2.	Positive production externality, less commonly seen, initiated in production that confers external benefits on others.	Negative externality is common & initiated in production which imposes an external cost on others.
3.	It is socially desirable	It is socially undesirable

Distinction between private costs and social costs.

Sn.	Private cost	Social cost
1	It is the cost faced by the producer or consumer directly involved in the transaction. Private cost includes direct cost of labour, materials, energy and other indirect overheads.	It refers to the total cost to the society on account of production and consumption activity. **Social Cost = Private Cost + External Cost**
2	Cost incurred and recognized by producer/ consumer directly.	Private cost + external cost borne by third parties not directly.
3	When negative production externalities exist private costs is less than social cost.	When negative production externalities exist social cost is greater than private cost.

5. Goods

a) **Characteristics of Private goods:** Private goods refer to those goods that yield utility to people. Anyone who wants to consume them must purchase them.

A few examples are: food items, clothing, movie ticket, television, cars, houses etc.

Properties of Private goods:

1. **Property Right:** Owners of private goods can exercise private property rights and can prevent others from using the good or consuming their benefits.
2. **Rivalrous:** Consumption of private goods is 'rivalrous' that is the purchase and consumption of a private good by one individual prevents another individual from consuming it
3. **Excludable:** Private goods are 'excludable' i.e. it is possible to exclude or prevent consumers who have not paid for them from consuming them or having access to them.
4. **No Free riding problem:**. This means that the private goods will be available to only those persons who are willing to pay for it.
5. **Rejectable:** All private goods and services can be rejected by the consumers if their needs, preferences or budgets change.

6. **Additional resource costs** are involved for producing and supplying additional quantities of private goods

b) Characteristics of Public Goods:

1. **Collective in nature:** Public goods yield utility to people and are products whose consumption is essentially collective in nature.
2. **No direct payment** by the consumer is involved in the case of pure public goods.
3. **Non-rival in consumption.** It means that consumption of a public good by one individual does not reduce the quality or quantity available for all other individuals. *When consumed by one person, it can be consumed in equal amounts by the rest of the persons in the society. For example, if, you eat your apple, another person too cannot eat it. But, if you walk in street light, other persons too can walk without any reduced benefit from the street light.*
4. **Public goods are non-excludable.** Consumers cannot (at least at less than prohibitive cost) be excluded from consumption benefits. If the good is provided, one individual cannot deny other individuals' consumption. For example, national defense.
5. **Public goods are characterized by indivisibility.** For example, you can buy chocolates or ice cream as separate units, but a lighthouse, a highway, an airport, defense, clean air etc cannot be consumed in separate units.
6. **Free Riding Problem:** Public goods are generally more vulnerable to issues such as externalities, inadequate property rights, and free rider problems.

Classification of Public Goods

	Excludable	Non-excludable
Rivalrous	A Private goods food, clothing, cars ____________ *Goods*	B Common resources such as fish stocks, forest resources, coal *Tragedy Of common*
Non-rivalrous	C Club goods, cinemas, private parks, satellite television ____________*Goods*	D Pure public goods such as national defense ___________ *Goods*

Pure and Impure Public Goods

sn	*Pure Public Goods*	*Impure Public goods*
1.	A pure public good is **non-rivalrous** and **non-excludable.**	There are many hybrid goods that possess **some features of both public and private goods**. Impure public goods are partially rivalrous or congestible.
2.	Since the goods are non-excludible, there is **no price mechanism** for it.	Since the goods are excludable, the market can provide a price mechanism for it.
3.	Provider of goods is not able to control the degree of	Provider of goods may be able to control the degree of congestion, by regulating the number of people

	congestion.	who may use it, or the frequency with which it may be used or both. *Consumption of these goods by another person reduces, but does not eliminate,* the benefits that other people receive from their consumption of the same good.
	Law, Govt School, Hospital, Army	*An example of an impure public good would be cable television. It is non-rivalrous because the use of cable television by other individuals will in no way reduce your enjoyment of it. The good is excludable since the cable TV service providers can refuse connection if you do not pay for set top box and recharge it regularly*

Further Classification of Impure goods

Two broad classes of goods have been included in the studies related to impure public goods.

1. Club goods; first studied by Buchanan	Facilities such as swimming pools, fitness centres etc. These goods are **replicable** and, therefore, individuals who are excluded from one facility may get similar services from an equivalent provider.
2. Variable use public goods; first analyzed by Oakland and Sandmo	Variable use public goods include facilities such as roads, bridges etc. Once they are provided, everybody can use it. They can be excludable or non-excludable. If they are excludable, some people can be discouraged from using it frequently by making them pay for its consumption. In doing so, the frequency of usage of the public good can be controlled. Since they are **not replicable**, the facility should be accessible to all potential users.

Other Types of Goods:-

Quasi-public goods Or Near public goods	**Meaning:** The quasi-public goods or services, also called a **near public good**, possess nearly all of the ***qualities of the private goods*** and some of the ***benefits of public good*** (For eg: education, health services). **Excludable but desirable**: It is easy to keep people away from them by charging a price or fee. However, it is undesirable to keep people away from such goods because the society would be better off if more people consume them. **Example:** Health and Education possess nearly all the qualities of private goods and some benefits of public goods. It is easy to keep people away from them by charging the price or fee. However, it is undesirable to keep people away from such goods because the society would be better off if more people consume them.
Common access resources and Tragedy of Commons	1. Common access resources or common pool resources are a special class of impure public goods which are **non- excludable** but **rivalrous** in nature. 2. They are generally available free of charge, thus, producers and consumers do not pay for these resources and therefore, they overuse them and cause their depletion and degradation. This creates threat to sustainability of these resources. 3. Examples of common access resources are fisheries, common grasslands, rivers, sea, backwaters biodiversity etc.

<table>
<tr><td></td><td>Tragedy of commons
Economists use the term 'tragedy of the commons' to describe the problem which occurs when rivalrous but nonexcludable goods are overused, to the disadvantage of the entire world. E.g. Earth's Atmosphere.</td></tr>
<tr><td>Global Public goods</td><td>Global public goods are goods whose impacts are indivisible spread throughout the entire globe. The benefits of these goods accrue to everyone in the world. The distinctive characteristics of global public goods are that there is no mechanism either market or government to ensure an efficient outcome as there is no availability of price mechanism.

Classification
<table>
<tr><td>WHO classifi-cation</td><td>WHO identifies two categories of Global Public Goods-
a) Final Public Goods which are "outcomes" (eg. The eradication of polio), and
b) Intermediate Public Goods which contribute to the provision of Final Public Goods (eg. International Health Regulations aimed at stopping the cross-border movement of communicable diseases and thus reducing cross-border health risks).</td></tr>
<tr><td>World Bank classif-ication

DTKFC</td><td>The World Bank identifies five areas of Global Public Goods-
a) Environmental commons (including prevention of climate change and biodiversity)
b) Communicable diseases (including HIV / AIDS, Tuberculosis, Malaria, and Avian Influenza),
c) International Trade
d) International financial Architecture
e) Global Knowledge for development.</td></tr>
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Question: what are types of Public goods

Pure public	**Impure public**	**Quasi-public**	**Global Public**	**Common access to resources**

Free Riding

1. Free riding is ***'benefiting from the actions of others without paying'***.
2. Consumers can take advantage of public goods ***without contributing sufficiently*** to their production.
3. The ***absence of excludability*** in the case of public goods and the ***tendency of people to act in their own self-interest*** will lead to the problem of free riding.
4. In other words, they will not express to buy a particular quantity at a price. Briefly put, there is no incentive for people to pay for the goods because they can consume it without paying for it.
5. If every individual plays the same strategy of free riding, the strategy will fail because nobody is willing to pay and therefore, nothing will be provided by the market. Then, a free ride for any one becomes impossible.

1. No public good will be provided in private markets

2. Private markets will seriously under produce public goods even though these goods provide valuable service to the society.

Information failure

Information failure is common in numerous market exchanges. When this happens misallocation of scare resources takes place and equilibrium price and quantity is not established through price mechanism.

Due to the following reasons the real markets are not fully satisfied.

a) **Complex nature**: Often, the nature of products and services tends to be highly complex. E.g. Cardiac surgery, financial products (such as pension fund products, mutual funds etc.)

b) **Information not available quickly and cheaply:** In many cases consumers are unable to quickly or cheaply find sufficient information on the best prices as well as quality for different products.

c) **Ignorant Buyer/seller:** People are ignorant or not aware of many matters in the market. Generally, they have inaccurate or incomplete data and consequently make potentially 'wrong' choices or decisions.

Asymmetric information

a) Asymmetric information occurs when there is an **imbalance in information between buyer and seller** i.e. when the buyer knows more than the seller or the seller knows more than the buyer can distort choices.

b) These are situations in which one party to a transaction knows a material fact that the other party does not. This phenomenon, which is sometimes referred to as the **'lemons problem',** is an important source of market failure. With asymmetric information, low-quality goods can drive high-quality goods out of the market.

c) For example, the landlords know more about their properties than tenants, a borrower knows more about their ability to repay a loan than the lender, a used-car seller knows more about vehicle quality than a buyer and some traders may possess insider information in financial markets.

Adverse Moral Hazard

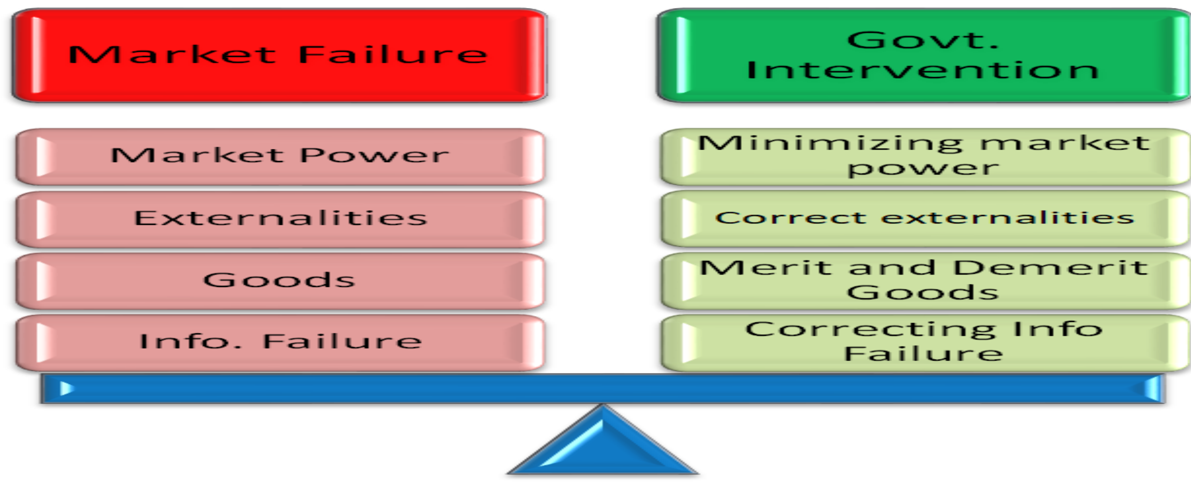
1. Moral Hazard is opportunism characterized by an informed person's taking **advantage of a less-informed person through an unobserved action**.
2. Moral hazard occurs when there is distortion of incentives to take care or to exert effort when **someone else bears the costs of the lack of care or effort**.
3. Moral Hazard occurs when a party whose actions are unobserved can affect the probability of magnitude of a payment associated with an event.
4. When someone is **protected from paying the full costs of their harmful actions,** they tend to at irresponsibly making the harmful consequences more likely.
5. Example: a) Insured Consumers are likely to take greater risks, knowing that c claim will be paid for by the Insurance Company,

   b) A person cares less about the Doctor charging excessive fees or using inefficient and costly procedures as part of his health care, since the costs are paid by the Insurance company.

   (Note: This causes Insurance Premium to rise for all persons, sending many potential customers out of the market.)

Unit 2- Government intervention to correct Market failure

Chapter Overview



Types of Government interventions

Government interference can be-

- **Direct** as a buyer or supplier of public goods / information
- **Indirectly** in the form of ***subsidies / taxes*** and regulation / influence to correct distortion in the market which occurs when there are deviations from the ideal perfectly competitive state.

Market Power- Government control

1. Policy options for limiting market power also include price regulation in the form of setting maximum prices that firms can charge.
2. Price regulation is most often used for **natural monopolies** (Monopoly arising due to inherent nature that can produce the entire output of the market at a cost that is lower than what it would be if there were several firms).
3. If a firm is a natural monopoly, it is more efficient to permit it serve the entire market rather than have several firms who compete each other.
4. Examples of such natural monopoly are electricity, gas and water supplies. In some cases, the government's regulatory agency determines an acceptable price, to ensure a competitive or fair rate of return.
5. This practice is called **rate-of-return regulation**. Another approach to regulation is setting **price-caps** based on the firm's variable costs, past prices, and possible inflation and productivity growth.

Government intervention to Correct Externalities

Freely functioning markets produce externalities because producers and consumers need to consider only their private costs and benefits and not the costs imposed on or benefits accrued to others.

Direct Control:

Direct controls ***prohibit*** specific activities that explicitly create negative externalities or require that the negative externality be limited to a certain level.

For instance, limiting emissions. Production, use and sale of many commodities and services are prohibited in our country. Smoking is completely banned in many public places. Stringent rules are in place in respect of tobacco advertising, packaging and labeling etc. If the firm breaches the law, it can invite monetary penalties or/and criminal liabilities.

Indirect/ market-based Control:

These provide economic incentives to Market Participants, to achieve the socially optimal solution.
They convert the Negative Externality (i.e Social Cost) into a private cost of the firm by way of- a) Taxes, and b) Permits.

Method 1) India has enacted the Environment (Protection) Act, 1986. The government may, ***through legislation, fix emissions standard which is a legal limit on how much pollutant a firm can emit.*** The firms have to install pollution-abatement mechanisms to ensure adherence to the emission standards. This means additional expenditure to the firm leading to rise in the firm's average cost. New firms will find it profitable to enter the industry only if the price of the product is greater than the average cost of production plus abatement expenditure.

Method 2) is to ***charge an emissions fee*** which is levied on each unit of a firm's emissions. The firms can minimize costs and enhance their profitability by reducing emissions. Governments may also form special bodies/ boards to specifically address the problem: for instance, the Ministry of Environment & Forest, the Pollution Control Board of India and the State Pollution Control Boards.

Market-based methods for solving the problems of negative externalities

1. Environmental Tax/ Pollution Tax/ Pigouvian Tax

a) These taxes are named after economist A.C Pigou who argued that an Externality cannot be alleviated by contractual negotiation between the affected parties and so taxation should be resorted to,
b) This is based on the concept of make the polluters pay.
c) Thus, the External (Social) Costs are converted into Internal (Private) Costs of the product or activity
d) This tax increases the Private Cost of production / consumption and would decrease the quantity demanded and therefore the output of the good.

2. Setting Limits for Negative externalities

a) Marketable Licenses (called permits) to emit limited quantities of pollutants can be bought at a specified price from the Regulatory Agency, by Polluters
b) Each Firm has permits specifying the number of units of emissions that the firm is allowed to generate
c) These permits are transferable. So, different pollution levels are possible across the regulated entities.

d) A high polluter has to either- i) pay monetary penalties, or ii) buy more permits both leading to increase in costs and decrease in profits.
e) A low polluter can- i) avoid Monetary Penalties, and ii) sell permits and earn revenue, both making such firm profitable.

Problems in administering an efficient pollution tax.

1. **Difficult to Administer-** Pollution taxes are difficult to determine and administer because it is difficult to discover the right level of taxation that would ensure that the private cost plus taxes will exactly equate with the social cost.
2. **Complex-** The method of taxing the polluters has many limitations because it involves the use of complex and costly administrative procedures for monitoring the polluters.
3. **No Genuine solution-** This method does not provide any genuine solutions to the problem. It only establishes an incentive system for use of methods which are less polluting.
4. **Failure in case of inelastic demand-** In the case of goods which have inelastic demand, producers will be able to easily shift the tax burden in the form of higher product prices. This will have an inflationary effect and may reduce consumer welfare.
5. **Adverse effect on employment-** Pollution taxes also have potential negative consequences on employment and investments because high pollution taxes in one country may encourage producers to shift their production facilities to those countries with lower taxes.

Merits	Demerits
a) Has flexibility b) Rewards efficiency c) Easy and simple to implement d) Ensures that pollution is minimized in a cost-effective manner, e) Provides strong incentives for innovation f) Increases consumer welfare when low costs of Low Polluter Firms are passed on to them in the form of lower prices.	a) There is **nothing to stop** firms from polluting the environment, they only provide an incentive to them do so, b) **Monopolies continue to pollute** and pass on the extra costs by increasing prices c) If **demand is inelastic**, the extra costs of penalties and/ or Additional permits are recovered by the firm, by increasing product prices.

Government Intervention to correct externalities Positive externalities:

Direct Control:- Production & Supply
a) Government enters the market directly as an Entrepreneur, to produce items whose externalities are vastly positive & pervasive.
b) Examples: R&D, Afforestation, Sewage Treatment, Cleaning up Rivers etc.

Indirect control:- Subsidies:
a) Subsidies given by Government reduces the Production Costs of firms.
b) This leads to higher output and supply.
c) Thus, such goods will be produced in higher quantities i.e. socially optimum level of output

Government intervention in case of Merit Goods

Points	Description
Meaning and Example	1. Merit Goods- a) are **socially desirable**, b) involve substantial **positive externalities** in their consumption. 2. Examples: Education, health Care, Welfare Services, housing, Fire Protection, Waste Management, Public Libraries, Museums and Public Parks.
Characte-ristics	Merit goods are 1. Rival 2. Excludable 3. Limited in supply 4. Reject-able by those unwilling to pay 5. And involve positive marginal cost for supplying to extra users.
Need for Intervent-ion	1. **Lower Output:** When Merit goods are provided through the market, only private benefits and private costs would be reflected in the price paid by consumers. So, they are likely to be **under-produced** and under-consumed through the market mechanism so that social welfare will not be maximized. 2. **Equity Fairness:** Certain Merit goods (Health and Education) should be provided free on the **basis of need rather than on the basis of individual's ability to pay**. (Health care) 3. **Uncertainty in consumption:** Due to uncertainty about the nature and timing of certain merit goods (e.g. Healthcare required in future), individuals may be unable to plan their expenditure and save for their future medical requirements. The market is unlikely to provide the optimal quantity of healthcare when consumers actually need it, as they may not have adequate finances to pay the market price. 4. **Imperfect information:** Information failure is widely prevalent with Merit goods. So, individuals may not act in their best interest because of imperfect information.
Regulati-ons	**Government can regulate the supply of merit goods in following manner** **1. Direct government provision:** Government produces Merit Goods, leading to large economies of scale and productive efficiency apart from generating substantial positive externalities. **2. Regulation:** Regulation determines **how a private activity may be conducted**. For example, the way in which education is to be imparted is government regulated. Governments can prohibit some type of goods and activities, set standards and issue mandates making others oblige. **3. Subsidies:** Subsidy is market-based policy and involves the government paying part of the cost to the firms in order to promote production of goods having positive externalities. **4.** Governments also engage in direct production of environmental

	quality. Examples are: afforestation, Replantation, protection of water bodies, treatment of sewage and cleaning of toxic (deadly) waste sites. 5. **Combination of government provision and market provision:** Government can increase the consumption of Merit Goods by purchasing them from the open market and supplying them free or at subsidized rates to the consumers.

Government intervention in De-merit Goods

Points	Description
Meaning and Example	1. Demerit goods are goods which are believed to be **socially undesirable** and involve **high level of negative externalities**. 2. Also, the private costs incurred by individual consumers are less than the social costs experienced by the society 3. Examples of demerit goods are cigarettes, alcohol, intoxicating drugs etc.
Characteristics leading to need of intervention	1. More than optimal production and consumption. 2. Socially undesirable and involve high level of negative externalities. 3. Marginal social cost > market price 4. Misallocation of society's scarce resources. 5. Consumers overvalue demerit goods because of imperfect information.
Need for Intervention	1. **Complete ban:** At the extreme, government may enforce complete ban on a demerit good. e.g. Intoxicating drugs. In such cases, the possession, trading or consumption of the good is made illegal. 2. **Persuasion** which is mainly intended to be achieved by negative advertising campaigns which emphasize the dangers associated with consumption of demerit goods. 3. **Through legislations** that prohibit the advertising or promotion of demerit goods in whatsoever manner. (Liquor Adv. Ban) 4. **Strict regulations** of the market for the good may be put in place so as to limit access to the good, especially by vulnerable groups such as children and adolescents. 5. **Regulatory controls** in the form of spatial restrictions e.g. smoking in public places, sale of tobacco to be away from schools, and time restrictions under which sale at particular times during the day is banned. 6. **Imposing unusually high taxes** on producing or purchasing the good making them very costly and unaffordable to many is perhaps the most commonly used method for reducing the consumption of a demerit good. For example, the GST Council has bracketed four items namely, high end cars, pan masala, aerated drinks and tobacco products
Reason why Govt. fails to provide such measures	Government Intervention may not have desired effect due to the following - 1. **Addiction level** of the consumer causes consumption in-spite of control measures. 2. It is difficult to determine the **level of taxes** that will equal to the Marginal external cost and the impact of Negative externalities. 3. **Inelastic nature of demand** of demerit goods is such that the

	increase in price resulting from additional taxes causes a less than proportionate decrease in demand. 4. Sellers can always **shift the taxes to consumers** without losing customers. So, production is not discouraged as such 5. Banned goods are **secretly driven underground** and traded in a hidden market.

Government intervention in other areas Goods

Area	Description
Public goods	**Reason why certain goods are produced by government despite the fact that it can be produced by Private sector** 1. ***Left to the markets and profit motives, these may prove dangerous to the society***. Examples are scientific approval of drugs, production of strategic products such as atomic energy, provision of security at airports, etc. 2. In the case of such pure public goods where entry fees cannot be charged, ***direct provision by governments through the use of general government tax revenues*** is the only option. 3. Public goods which are non-excludable are highly prone ***to free rider problem*** and therefore markets are unlikely to get established. 4. Direct provision of a public good by government can help overcome free-rider problem which leads to market failure. The non-rival nature of consumption provides a strong argument for the government rather than the market to provide and pay for public goods.*(This is the reason why private sector is reluctant to provide such services)* **Remedies for free rider problem** 1. Excludable public goods can be provided by government and the same can be financed through entry fees. 2. A very commonly followed method is to grant licenses to private firms to build a public good facility. Under this method, the goods are provided to the public on payment of an entry fee. In such cases, the government regulates the level of the entry fee chargeable from the public and keeps strict watch on the functioning of the licensee to guarantee equitable distribution of welfare.
Price intervention: non-market pricing	1. Very often, there is strong political demand for governments to intervene in markets for various goods and services on grounds of **fairness and equity.** 2. Price intervention generally takes the form of ***price controls which are legal restrictions on price***. Government usually intervenes in many primary markets which are subject to extreme as well as unpredictable fluctuations in price 3. **Price floor** (a minimum price buyer is required to pay). Price floor means the lowest price fixed by government for a product. The Government fixes floor price for farm products. This regulates income of the farmers. 4. **Price ceiling** (a maximum price seller is allowed to charge for a good or service). When prices of certain essential commodities rise extremely, government may resort to controls in the form of

	price ceilings for making a resource or commodity available to all at reasonable prices. 5. Fixing of minimum wages and rent controls are examples of such market intervention. 6. In the case of many crops the government has initiated the Minimum Support Price (MSP) programme as well as procurement by government agencies at the set support prices. The objective is to guarantee steady and assured incomes to farmers. In case the market price falls below the MSP, then the **guaranteed MSP will prevail.** With the objective of ensuring stability in prices and distribution, governments often intervene in grain markets through building and maintenance of buffer stocks. It involves purchases from the market during good harvest and releasing stocks during periods when production is below average. *(this means supply control)*
Government Intervention for Incomplete Information MUTUAL FUNDS Sahi Hai	For combating the problem of market failure due to information problems following interventions are resorted to: • Government makes it ***mandatory to have accurate labeling and content disclosures*** by producers. For example: SEBI requires that accurate information be provided to prospective buyers of new stocks. • Public dissemination of information to improve knowledge and subsidizing of initiatives in that direction. • Regulation of advertising and setting of advertising standards to make advertising more responsible, informative and less persuasive.

Unit 3- Government Function

Chapter Overview

Allocation Function → Redistribution function → Stabilisation function

Central economic problem and type of economies

Role of Government

Objectives of Government Interventions:

1. To control potential rise in prices. (MRTP Act)
2. To bring in welfare to the under privileged sections of the Society by ensuring equity and fairness, (Subsidy)
3. To provide Incentives to promote production / use of Resources in a socially desirable direction etc. (Organic vegetable)

Argument in favor of Government Interventions:

1. The role of government ***improves the wellbeing of individuals and households***.
2. ***Under production*** of certain goods & higher prices than would exist under conditions of competition(Generic Medicine)
3. ***Non-production of public goods*** (or collective goods) in sufficient quantities by the market. (Parks and Playground)
4. Production and Consumption of a Good or Service affects People and they cannot influence through Markets decision about how much of the Good or Service should be produced e.g. Pollution
5. Reduction or Distortion in choices available to consumers, and consequently lower welfare. (Only Private mode of Transport)
6. Equity and Fairness- to Curb Inequalities in the distribution of Income and Wealth.

7. Instabilities caused by Business cycles and fluctuations which lead to recession, inflation, etc. for prolonged periods, and cannot be corrected by Market system as such.
8. Market's inability to rectify "**Stagflation**" i.e. a State of affairs in which inflation and Unemployment co-exist,
9. Market's inability to rectify "**Contagious Effect**" i.e. forces of instability transmitted from one country to other countries, due to increased international interdependence

Arguments against government interventions:

- Government intervention does not imply that Markets are replaced by Government action. Government can act only as **complement rather than as a substitute** to the Market System in an economy,
- Governments may **not always** be **unbiased and benevolent**.
- Individuals may use Government as a Mechanism for maximizing their **self interest**
- In certain cases, the **cost** incurred by Government to deal with some Market failure could be greater than the cost of Market Failure itself.
- Government intervention may produce **fresh and more serious problems** that the ones sought to be rectified.
- Government intervention is ineffective if it causes **wastage of resources** expended for the intervention
- Governments are likely to commit **serious errors** in its attempt to correct Market failure.

View of Economists

Adam Smith	Adam Smith is often described as a bold Advocate of Free Markets and Minimal Governmental Activity. However, Smith underlines the role of government in the following areas which the market may fail to produce on account of lack of sufficient Profits- ▪ National Defense ▪ Establishment and Maintenance of Highly beneficial Public Institutions ▪ Maintenance of Justice ▪ Public Works
Richard Musgrave	Richard Musgrave, in his classic treatise "The Theory of Public Finance" (1959) introduced the three-branch taxonomy of the role of Government functions in a Market Economy. Musgrave believed that, for conceptual purposes, the functions of government are to be separated into three, namely- **Allocation Function (Efficiency Focus)-** Aims to correct the sources of inefficiency in the Economic System **Distribution Function (fairness focus**)- Ensures that the Distribution of Wealth and Income is fair and equitable. **Stabilization Function (Maintenance and Welfare Focus)-** Covers Monetary and Fiscal Policy, ensuring Macro-economic stability, Maintenance of High Levels of Employment and Price Stability etc.

Allocation Function

Meaning: Optimal or efficient allocation of scarce resources means that the available resources are put to their best use and no wastages are there.

Market failures which hold back the efficient allocation of resources

1. **Imperfect competition and presence of monopoly power** leading to under-production and higher prices
2. Markets typically fail to provide collective goods which are, by their very nature, consumed in common by all the people.
3. Externalities which arise when the production and consumption of a good or service affects people and they cannot influence through markets the decision about how much of the good or service should be produced e.g. pollution.
4. Factor immobility which causes unemployment and inefficiency
5. Imperfect information, and
6. Inequalities in the distribution of income and wealth.

Reason for Government Intervention in allocation:

1. A market economy is subject to serious malfunctioning in several basic respects.
2. There is also the problem of nonexistence of markets in a variety of situations.
3. While private goods will be sufficiently provided by the market, public goods will not be produced in sufficient quantities by the market.
4. Government intervention will improve in social welfare. In the absence of appropriate government intervention, market failures may occur and the resources are likely to be misallocated by too much production of certain goods or too little production of certain other goods.

According to Musgrave, the state is the instrument by which the needs and concerns of the citizens are fulfilled and therefore, public finance is connected with economic mechanisms that should ideally lead to the effective and optimal allocation of limited resources.

The resource allocation role of government's fiscal policy focuses on the potential for the government to improve economic performance through its expenditure and tax policies. The allocative function in budgeting determines who and what will be taxed as well as how and on what the government revenue will be spent. The allocation function also involves the reallocation of society's resources from private use to public use.

A variety of allocation instruments are available by which governments can influence resource allocation in the economy.

1. Government may **directly produce** the economic good (for example, electricity and public transportation services)
2. Government may **influence private allocation** through incentives and disincentives (for example, tax concessions and subsidies may be given for the production of goods that promote social welfare and higher taxes may be imposed on goods such as cigarettes and alcohol)
3. Government may influence **allocation through its competition policies**, merger policies etc which will affect the structure of industry and commerce (for example, nationalization of banks)
4. Governments' regulatory activities such as licensing, controls, minimum wages, and directives on location of industry influence resource allocation
5. Government **sets legal and administrative frameworks**, and
6. **Any of a mixture** of intermediate techniques may be adopted by governments

Re-distribution Function

Meaning: The distribution responsibility of the government arises from the fact that, left to the market, the distribution of income and wealth among individuals in the society is likely to be skewed and therefore the government has to intervene to ensure a more desirable and just distribution.

The distribution function of the government aims at-

1. **Equitable Distribution**- Redistribution of income to achieve an equitable distribution of societal output among households.
2. **Well-being** of those members of the society who suffer from deprivations of different types
3. Providing **equality** in income, wealth and opportunities
4. Providing security for people who have **hardships**, and
5. Ensuring that everyone enjoys **a minimal standard of living**.

Redistribution function/ market intervention for socio- economic reasons performed by governments are:

1. Taxation policies of the government whereby **progressive taxation** of the rich is combined with provision of subsidy to the poor household.
2. Proceeds from progressive taxes used for financing public services, especially those that benefit low-income households (example, supply of essential food grains at highly subsidized prices to BPL households).
3. **Employment reservations** and preferences to protect certain segments of the population,
4. Regulation of the manufacture and sale of certain products to ensure the health and well-being of consumers, and
5. **Special schemes for backward regions** and for the vulnerable sections of the population

Redistribution measures should be accomplished with minimal efficiency costs by carefully balancing **equity and efficiency** objectives-comment:

1. In modern times, most of the egalitarian welfare states provide free or subsidized education and health-care system, unemployment benefits, pensions and such other social security measures.
2. In other words, governments' redistribution policies which interfere with producer choices or consumer choices are likely to have efficiency costs or deadweight losses.
3. For example, greater equity can be achieved through high rates of taxes on the rich; but high rates of taxes could also act as a disincentive to work and discourage people from savings and investments and risk taking. This in turn will have negative consequences for productivity and growth of the economy. Consequently, the potential tax revenue may be reduced and the scope for government's welfare activities would get seriously limited. Thus trade-off between equity and efficiency should be achieved.
4. In other words, redistribution measures should be accomplished with minimal efficiency costs by carefully balancing equity and efficiency objectives.

Stabilization Function

Stabilization function of the government is derived from the Keynesian proposition that *a market economy does not automatically generate full employment and price stability and therefore the governments should pursue deliberate stabilization policies*.

Explanation/ rationale:

The stabilization function is one of the key functions of fiscal policy and ***aims at eliminating macroeconomic fluctuations arising from suboptimal allocation***.

Business cycles are ***natural phenomena*** in any economy and they tend to occur periodically. The market system has inherent tendencies to create business cycles. The ***market mechanism is limited in its capacity*** to prevent or to resolve the disruptions caused by the fluctuations in economic activity. In the absence of appropriate corrective intervention by the government, the instabilities that occur in the economy in the form of recessions, inflation etc. may be ***prolonged for longer periods*** causing enormous hardships to people especially the poorer sections of society. It is also possible that a situation of stagflation (a state of affairs in which inflation and unemployment exist side by side) may set in and make the problem more intricate.

The stabilization issue also becomes more complex as the increased international interdependence causes forces of instability to get easily transmitted from one country to other countries This is also known as **"Contagion effect".**

The stabilization function is concerned with the performance of the aggregate economy in terms of:

1. labour employment and capital utilization,
2. overall output and income,
3. general price levels,
4. balance of international payments, and
5. the rate of economic growth.

Unit 4 – Fiscal Policy

[Taxation, expenditure and borrowing] [Demand-Employment-Output]

Fiscal Policy – Meaning and Objective

Meaning:

Fiscal policy involves the use of ***government spending, taxation and borrowing*** *to influence both the pattern of economic activity and level of growth of aggregate* **demand, output and employment**. *It includes any design on the part of the government to change the price level, composition or timing of government expenditure or to alter the burden, structure or frequency of tax payment.*

Objective of Fiscal policy:

1. Achievement and maintenance of full employment,
2. Maintenance of price stability,
3. Acceleration of the rate of economic development, and
4. Equitable distribution of income and wealth,

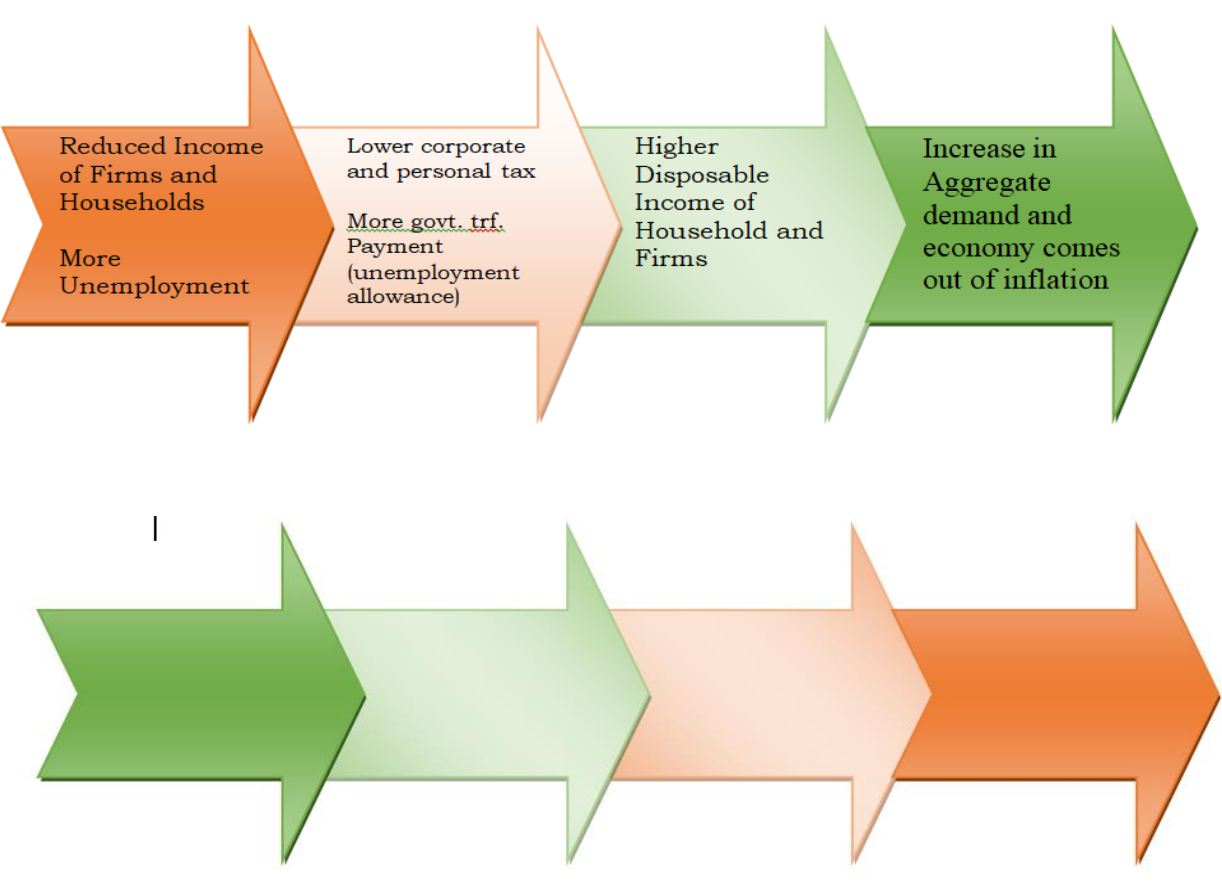
Automatic stabilizers versus discretionary fiscal policy

SN.	Discretionary fiscal policy	Non- Discretionary fiscal policy
1.	Discretionary fiscal policy refers to a ***deliberate policy actions*** on the part of the government to change the levels of expenditure and taxes to influence the level of national output, employment, and prices.	Non- discretionary fiscal policy or automatic stabilizers are part of the structure of the economy and are ***'built-in'*** fiscal mechanism that operate automatically to reduce the expansions and contractions of the business cycle.
2.	It occurs when there is unemployment or inflation problem.	It occurs when there is changes in economic conditions cause government expenditures and taxes automatically.
3.	Example: specific export subsidies. Controlling inflation and recession by borrowing and spending of government.	Example: personal income tax, corporate income tax, and transfer payment.

Non-discretionary fiscal policy/ Automatic

Meaning	a) Changes in the level of taxation and level of Government Spending are dependent on and are determined by the level of Aggregate Production and Income b) Hence, such changes tend to occur automatically, without any explicit action by Government c) So, any Government Programme that **automatically** tends to reduce fluctuations in GDP is called an Automatic Stabilizer.
Example	Personal income tax, corporate income tax, and transfer payment.
Explanation	1. In automatic or non-discretionary fiscal policy, the tax policy and expenditure pattern are so framed that taxes and government expenditure automatically change with the change in national

	income. 2. It involves built- in- tax or expenditure mechanism that automatically increases aggregate demand when recession is there and reduces aggregate demand when there is inflation in the economy. 3. Personal income taxes, corporate income taxes and transfer payments (unemployment compensation, welfare benefits) are prominent automatic stabilizers.
Automatic Stabilizers during Recession when incomes are reduced	1) With ***progressive tax structure***, there will be a decline in the proportion of income that is taxed. This would result in lower tax payments as well as some tax refunds. 2) Simultaneously, government expenditures increase due to increased ***transfer payments*** like unemployment benefits. 3) These two together provide proportionately more disposable income available for consumption spending to households.
Automatic Stabilizers during Inflation/ Demand-pull inflation	1) When an economy expands, employment increases, with progressive system of taxes people have to pay higher taxes as their income rises. This leaves them with lower disposable income and thus causes a decline in their consumption and therefore aggregate demand. 2) Similarly, corporate profits tend to be higher during an expansionary phase attracting higher corporate tax payments. *With higher income taxes, firms are left with lower surplus causing a decline in their consumption and investments and thus in the aggregate demand.* 3) Also, during expansion unemployment falls, therefore government expenditure by way of transfer payments falls and with lower government expenditure inflation gets controlled to a certain extent.



What are the symptoms of the beginning of a recession?
Declining GDP- decline in real income - growing unemployment- declining prices – lower aggregate demand]

Discretionary fiscal policy

1. Discretionary Fiscal Policies are deliberate actions taken by Government, to correct instabilities, fluctuations in the economy. Automatic Stabilizers do not always sufficient to manage instabilities.
2. Discretionary Policies seek to address the GDP measure [i.e. GDP = C + I + G + (X – M)], Where C = Private Consumption, I = Private Investment, G = Government spending, (X – M) = Net exports.
3. Governments can influence economic activity (GDP) by controlling G directly and influencing C, I, and (X – M) indirectly through changes in taxes, transfer payments and expenditure policies.
   - *Examples: Specific export subsidies and concessions are an example of boosting (X – M) to promote exports, while imports can be discouraged by increasing import duties.*
   - *Deliberate higher levels of Government Spending during recession, increase demand. While curtailing the expenditure during inflation*
   - *Increase in Government Borrowings during inflation phase, is intended to reduce the Disposable incomes of Households and slacken the demand and moderate the inflation effect*.

Taxes as fiscal policy Instruments

<table>
<tr><th colspan="2">Four Instruments/ tools of Fiscal Policies</th></tr>
<tr><td>Taxes</td><td>Meaning: Taxation policies are effectively used for establishing stability in an economy.
Taxes determine the size of disposable income in the hands of the general public which in turn determines aggregate demand and possible inflationary and deflationary gaps.

Action during Inflation-
1. New Taxes can be levied and the rates of existing taxes are increased, in order to reduce the Disposable Incomes and to wipe off the surplus purchasing power.
2. However, excessive taxation may stifle new investments, and so this tool has to be used cautiously.

Action during Recession
1. Lower personal taxes lead to higher disposable incomes with people, inducing higher consumption.
2. Low Corporate Taxes increase the prospects of profits for business and promote further investment.
3. Thus, tax rates are lowered, in order to encourage private expenditure on Consumption & Investment.</td></tr>
<tr><td>Government expenditure</td><td>Meaning
Government expenditures include:
1. current expenditures to meet the day to day running of the government,</td></tr>
</table>

	2. **capital expenditures** which are in the form of investments made by the government in capital Equipments and infrastructure, and 3. **Transfer payments** i.e. pension, unemployment allowance **During a recession,** 1. It may initiate a fresh wave of public works, such as construction of roads, irrigation facilities, sanitary works, ports, electrification of new areas etc. 2. Government expenditure involves employment of labour as well as purchase of multitude of goods and services. 3. These expenditures directly generate incomes to labour and suppliers of materials and services. 4. Apart from the direct effect, there is also indirect effect in the form of working of multiplier. (we have studied this in chapter 1 investment multiplier). **During Expansion/ Inflation phase**- 1. Government reduces its spending, by deferring / avoiding public works, reducing further employment in Government Institutions etc 2. Reduction in Labour Incomes and reduced Govt purchases helps to eliminate excess aggregate demand. **There are two concepts of public spending during depression- 'pump priming' and 'compensatory spending'.** 1. Pump priming assumes that when private spending becomes deficient, certain volumes of public spending will help to revive the economy. 2. Compensatory spending is said to be resorted to when the government spending is carried out with the obvious intention to compensate for the deficiency in private investment.
Public Debt	**Meaning and Types:** 1. Public debt may be *internal* or *external*; 2. when the government borrows from its own people in the country, it is called **internal debt.** 3. When the government borrows from outside sources, the debt is called **external debt.** 4. Public debt takes two forms namely, **market loans** and **small savings.** 5. **In the case of market loans**, the government issues treasury bills and government securities of varying denominations and duration which are traded in debt markets. For financing capital projects, long-term capital bonds are floated and for meeting short-term government expenditure, treasury bills are issued. 6. **The small savings** represent public borrowings, which are not negotiable and are not bought and sold in the market. In India, various types of schemes are introduced for mobilizing small savings e.g., National Savings Certificates, National Development Certificates, etc. **Action During Inflation:** Borrowing from the public through the sale of bonds and securities

	curtails the aggregate demand in the economy. **Action During Recession:** Repayments of debt by governments increase the availability of money in the economy and increase aggregate demand.
Budget	**Meaning:** 1. The budget is a statement of Revenues from Taxes & other sources (say R), and Expenditures (say E) made by a nation's Government in a year. 2. A Government's Budget can either be balanced, surplus, or deficit. 3. Note: Balanced Budget (R = E): This budget has no net effect on Aggregate Demand since the leakages from the system (Taxes collected) are equal to the Injections (Govt Expenditure). **Action during Recession:** 1. Government proposes a Deficit Budget 2. Deficit Budget (R > E): This budget has a positive net effect on aggregate demand since injections exceed leakages from the Government sector. Consumption & Investment is enhanced. 3. Deficit budget may be financed through- a) Past Surpluses, if any or b) Government Borrowings, or c) Monetization (i.e. creation of additional money to finance expenditure) **Action during Inflation:** 1. Government proposes a surplus budget. 2. Surplus budget (R > E): This budget has a negative net effect on the Aggregate demand since leakages exceed injections. Disposable Income available for consumption & Investment is reduced.

National Debt

- A Nation's debt is the difference between its Total Past Deficits and its total Past surpluses
- If a government as borrowed money over the years to finance its deficits and has not paid it back through accumulated surplus, then it is said to be in Debt.
- A surplus budget reduces National Debt and a deficit budget will add to the National Debt.

Types of Fiscal

There are two basic types of Fiscal- **Expansionary and contractionary**

	Expansionary Fiscal policy	**Contractionary Fiscal Policy**
When Used?	Expansionary fiscal policy is designed to **stimulate** the economy- 1. During the contractionary phase of a business cycle. 2. When there is an anticipation of a business cycle contraction.	Designed to **restrain** the levels of economic activity of the economy - 1. During an Inflationary phase. 2. When there is anticipation of a business-cycle expansion which is likely to induce inflation.
Actions by Govern	1. Increasing aggregate expenditures and aggregate demand through an increase in all types of	1. Decreasing the aggregate expenditures and aggregate demand through a decrease in all

ment	government spending 2. Decrease in taxes.	types of government spending 2. Increase in taxes.
Scenario	1. Decline / slump in overall economic activity, 2. Decline in Real Income (Real GDP) 3. Higher rates of unemployment 4. Fall in aggregate demand (i.e demand- deficit recession), 5. Production of lower quantity of goods and services	1. Increase in Aggregate Demand (i.e. Demand-pull inflation) 2. Increase in economic activities of consumption and Investment, due to higher levels of disposable incomes with households and firms, 3. higher factor prices, leading to higher cost of producing goods.
Gap	1. A recessionary gap, also known as a contractionary gap, is said to exist if the existing levels of aggregate production is less than what would be produced with full employment of resources. 2. It is a measure of output that is lost when actual national income falls short of potential income and represents the difference between the actual aggregate demand and the aggregate demand which is required to establish the equilibrium at full employment level of income. 3. This gap occurs during the contractionary phase of business-cycle and results in higher rates of unemployment.	1. Inflationary Gap or Expansionary Gap- 2. It arises Aggregate demand rises beyond what the economy can potentially produce by fully employing its given resources. 3. Demand increase with a given level of output, pushes up prices is called Demand-Pull inflation 4. Prices of factors (e.g. Rent, Labour) increase, leading to increase in cost of producing goods and services-this is called Cost-Push Inflation.
Tools	• Lower personal and corporate taxes, • Higher levels of Government spending. • Reduction in Government borrowing and • Higher budget deficit or reduced surplus	• Higher personal and corporate taxes • Reduced levels of Government spending • Increase in Government Borrowing, and • Smaller Budget deficit or higher surplus
Impact	• Higher levels of disposable income and more government spending increase consumption levels of households	• Higher Taxes, lower levels of disposable income and less government spending reduces the consumption levels of

	• Lower corporate taxes gives more income for firms to increase investment. New firms are attracted to invest, due to lower taxes • Higher consumption and Investment, stimulates the economy and increases Aggregate Demand.	households. • Higher corporate taxes leads to less net incomes for firms, and consequently lower investment. New firms do not enter the field, due to higher taxes. • Lower consumption and investment, regulates the economy and moderates the unsustainable increase in aggregate demand.

FISCAL POLICY FOR LONG-RUN ECONOMIC GROWTH

When government supports building a modern infrastructure, the private sector is provided with the requisite overheads it needs. Government provision of public goods such as education, research and development etc. provide momentum for long-run economic growth. A well-designed tax policy that rewards innovation and entrepreneurship, without discouraging incentives will promote private businesses who wish to invest and thereby help the economy grow.

Fiscal policy for Reducing Inequality

Means and Methods:

1. **Direct Tax:** A progressive direct tax system ensures that those who have greater ability to pay contribute more towards defraying the expenses of government and that the tax burden is distributed fairly among the population.

2. **Indirect taxes** can be differential: for example, the commodities which are primarily consumed by the richer income group, such as luxuries, are taxed heavily and the commodities the expenditure on which form a larger proportion of the income of the lower income group, such as necessities, are taxed light.

Government Spending on Expenditure:

1. Redistributing income from the rich to the poorer sections of the society.
2. Poverty alleviation programmes. free or subsidized medical care, education, housing, essential commodities etc. to improve the quality of living of poor
3. Infrastructure provision on a selective basis
4. Various social security schemes such ad old-age pensions, unemployment relief.
5. Subsidized production of products of mass consumption
6. Public production and/ or grant of subsidies to ensure sufficient supply of essential goods, and
7. Strengthening of human capital for enhancing employability etc.

Shortcoming and Limitations of Fiscal policy

1. **Timing Problem:** Discretionary fiscal policy may create more problems due to time delays (i.e lags) which include-
   a) Recognition Lag- Delay in recognizing the economy's problems, and the need for Government Intervention,
   b) Decision Lag- Delay in evaluating the possible alternative policies, and in deciding the most appropriate policy

c) Implementation Lag- Delay in evaluating the possible alternative policies, and in deciding the most appropriate policy,
d) Impact Lag- outcomes of a policy are not visible for some time.

2. The effect of this is that Fiscal Policy changes may at times be badly timed, so that it is highly possible that an expansionary policy is initiated when the economy is already on a path of recovery and vice-versa
3. **Government constrains:**
   - Difficulties in instantaneously changing governments' spending and taxation policies.
   - Difficult to reduce government spending on various items such as defense and social security as well as on huge capital projects which are already midway.
   - Public works cannot be adjusted easily along with movements of the trade cycle because many huge projects such as highways and dams have long gestation period. Besides, some urgent public projects cannot be postponed for reasons of expenditure cut to correct fluctuations caused by business cycles.
4. There are **possible conflicts** between different objectives of fiscal policy.
5. **Negative effect of Deficit financing**: Deficit financing increases the purchasing power of people. The production of goods and services, especially in under developed countries may not catch up simultaneously to meet the increased demand. This will result in prices spiraling beyond control.
6. **"Crowding Out" Effect:** If Governments compete with the private sector to borrow money for spending, this may cause interest rates to go up. Firms' willingness to invest may be reduced. Individuals too may be reluctant to borrow and spend and the desired increase in Aggregate demand may not be realized.

Crowding out

Meaning and Example:
1. When spending by government in an economy **replaces** private spending, the latter is said to be crowded out. (Note: Government spending has to "Support" and "enhance" private spending not merely "replace" it.
2. "Crowding out" effect is the negative effect that a fiscal policy may generate, when money from the private sector is "crowded out" to the public sector.
3. **Example:** If government provides free computers to students, the demand from students for computers may not be forthcoming.

Impact on Investment:
1. High Interest Rate- When government *increases it's spending by borrowing from the loanable fund*s from market, the demand for loans increases and this *pushes the interest rates up*. Private investments are sensitive to interest rates and therefore some private investment spending is discouraged.
2. Government *increases the budget deficit by selling bonds or treasury bills*, the amount of money with the private sector decreases and consequently *interest rates will be pushed up*. As a result, private investments, especially the ones which are interest –sensitive, will be reduced.

Impact on market's ability of self-correction:
1. If Higher Government spending during recessions 'crowds-out' private spending in an economy, it will reduce the economy's ability to self-correct from the recession, and reduce the economy's prospects of long-run economic growth.
2. Effect of Government spending in increasing aggregate demand would be smaller than what it should be, and thus the Fiscal policy may become ineffective.

Chapter No. 3: Monetay policy

Unit 1: Money- Basics, Characteristics and Functions

1. Money- Meaning and Basics

Money refers to assets which are commonly used and accepted

- **as a means of payment** or
- **as a medium of exchange** or
- **medium of transferring purchasing power**.

- For **policy purposes,** money may be defined as the **set of liquid financial assets**, the **variation in the stock** of which will have **impact on aggregate economic activity**.

- Anything that would act as a medium of exchange is not necessarily money. For example, a bill of exchange may also be a medium of exchange, but it is not money since it is not generally accepted as a means of payment. Money is a totally **liquid asset** as it can be **used directly, instantly, conveniently and without any costs or restrictions** to make payments.

- Currency which represents money **does not necessarily have intrinsic value.** As you know, fiat money has no intrinsic value, but is used as a medium of exchange because the government has, by law, made them **"legal tender,"** which means that they serve by law as means of payment

- In modern days, money is not necessarily a physical item; it may also constitute **electronic records.**

2. Characteristics of Money

Money, though not having any inherent power to directly satisfy human wants, by acting as a medium of exchange, it commands purchasing power and its possession enables us to purchase goods and services to satisfy our wants.
Following are the important characteristics of Money- [**Memory technique- SUPAR LCD**]

- Generally **A**cceptable
- Durable or **L**ong-lasting
- Effortlessly **R**ecognizable.
- Difficult to **C**ounterfeit i.e. Not easily reproducible by people
- Relatively **S**carce, but has elasticity of supply
- **P**ortable or easily transported
- Possessing **U**niformity; and
- **D**ivisible into smaller parts in usable quantities or fractions without losing value.

3. Functions of Money [MT- DSLR ECB se lena hai toh T&C lagega]

- **Money is a convenient medium of Exchange** or it is an instrument that facilitates easy exchange of goods and services.
- **Satisfaction of Wants:** Money, though not having any inherent power to directly satisfy human wants, by acting as a medium of exchange, it commands purchasing power and its possession enables us to purchase goods and services to satisfy our wants.
- **Better than barter:** By acting as an intermediary, money increases the ease of trade and reduces the inefficiency and transaction costs involved in a barter exchange. By decomposing the single barter transaction into **two separate transactions of sale and purchase**, money eliminates the need for **double coincidence of wants.**
- Money also facilitates separation of transactions both in **time and place** and this in turn enables us to economize on time and efforts involved in transactions.
- **Common Measure of value:** Money serves as common measure of Value or Common Denominator of Value. it is convenient to measure the prices of all commodities in terms of a single unit, rather than record the relative price of every good in terms of every other good. It reduces the number of exchange ratios between goods and services
- **Comparability:** Goods and services which are otherwise not comparable are made comparable through expressing the worth of each in terms of money.
- **Deferred payments:** Money serves as a unit or standard of deferred payment i.e money facilitates recording of deferred promises to pay. Money is the unit in terms of which future payments are contracted or stated.
- **Liquidity and Reversibility:** Additionally, money also commands reversibility as its value in payment equals its value in receipt. All assets other than money lack perfect reversibility in the sense that their value in **payment is not equal to their value in receipt.**

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Unit 2: Demand for Money

1. Demand for Money

The Demand for Money is because of two reasons-

1. Demand for money is actually demand for **liquidity and demand to store value**. It represents the desire of people to hold money as an asset instead of other assets like bonds in their asset portfolio.
2. Also, people demand money because they wish to have **command over real goods and services** with the use of money.

2. Variables/ Factors on which Demand for Money depends

Demand for money or the quantity of money which people like to hold depends upon-

Sr.no	Factor	Nature of relationship	Relationship
1	Income and Expenditure	Direct	Higher the income and expenditure, higher will be the demand of the money. This is because with the higher income the tendency to expend will also rise and thus demand will also rise.
2	General price Index	Direct	If the general price index is high, one will try to hold money.
3	Interest (Opportunity cost)	Inverse	Opportunity cost is the interest rate a person could earn on other assets. Thus, higher the rate more will be temptation to invest in other assets.
4	Degree of Financial Innovation	Inverse	Financial innovation like internet banking, ATM, UBI based payments etc. reduces the need of holding the money. **Google pay and Paytm**

3. Theories of Demand for Money

Theories of Demand for Money: The following are theories on the Demand for Money-
a) Quantity theory of Money (QTM) - Classical Approach or Fisher's Approach
b) Cash Balance Approach - Neo-classical Approach or Cambridge Approach
c) Liquidity Preference Theory - Keynesian Theory
d) Post Keynesian Theories –
(i) Inventory Approach- Baumol
(ii) Friedman Theory, and

(iii) Demand for Money as Behavior towards Risk-Tobin

Transaction Need	Precaution Need	Speculative Need

4. Quantity Theory of Money [QTM]

- The quantity theory of money was propounded by **Irving Fisher of Yale University** in his book **'The Purchasing Power of Money'** published in 1911.
- This approach suggests that the money is demanded only for ***Transaction purpose.***

As per Fisher's approach-

Quantity of Money demanded = price level (P) x Total volume of transaction (T)= Supply of Money (MV+M'V')

Therefore, MV= PT (where only Actual money is considered and not credit money)

And MV+M'V' = PT (where both Actual and Credit money is used)(Credit money means demand deposits by bank)

Here,
M= Total Amount of Money in circulation
V= Transaction Velocity of Circulation- means average number of times a **unit of money** is spent in purchasing goods and services
P= Average Price Level
T= Total Number of Transactions- T is a function of national income. Since full employment prevails, the volume of transactions T is fixed in the short run.
M'= Total quantity of Credit Money
V'= Velocity of Circulation of Credit money.

Explanation:

- QTM demonstrate that there is **strong relationship between money and price level**.
- **Changes in the general level of commodity prices** or changes in the value or purchasing power of money are determined by **changes in the quantity of money in circulation**.
- The **total supply of money** in the community consists of the quantity of actual money (M) and its velocity of circulation (V). i.e. MV + M'V'. (V and V' remains constant)
- T is a function of national income. Since full employment prevails, the volume of transactions **T is fixed in the short run.**
- the total volume of transactions **(T) multiplied by the price level (P) represents the demand** for money.
- The demand for money (PT) is equal to the supply of money (MV + M'V)'.
- Thus, at equilibrium, Demand = supply = MV+M'V' = PT.

Thus, more the number of transactions people want, greater will be the demand for money.

5. Cash balance approach/ Neo classic Approach/ Cambridge approach

In the early 1900s, Cambridge Economists **Alfred Marshall, A.C. Pigou** and others put forward **neo-classical theory or cash balance approach.**
As per the Cambridge version the demand of the money is because of the following two reasons-

1. since the sale and purchase of commodity does not place simultaneously, they need temporary abode of purchasing power, enabling the possibility of split-up of sale and purchase to two different points of time rather than being simultaneous. i.e. avoiding double coincidence of wants. **Transaction need**
2. being a hedge against uncertainty. **Precautionary need.**

Demand for Money= Proportion of income that people want to hold as cash (k) x income (PY).

- Higher the income, higher will be the quantity purchased and thus greater money amount of money will be needed.
- The term **'k'** in the above equation is called **'Cambridge k'**. This represents the portion of nominal income that people want to hold as cash balance.

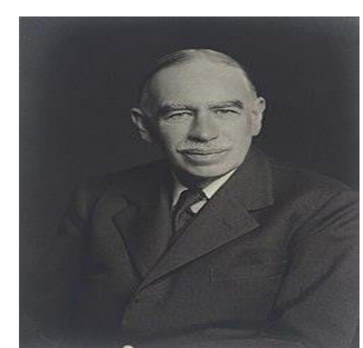
Demand of Money (M^d) = k PY	Where, Y = Real national income P = Average price level of currently produced Goods & services PY= Nominal Income K = Proportion of PY that people want to hold as Cash Balances

6. Difference between QTM and classical theory

QTM	Cambridge theory
Money is demanded only for Transaction need	Money is demanded only for Transaction need and precautionary need
Money is only the medium of exchange	Money is medium of exchange and storage of value
Formula: MV+M'V' = PY	Formula: M^d = KPY

Liquidity theory of demand/ Keynesian Theory of Demand for Money

"Liquidity preference' denotes people's desire to hold money rather than securities or long-term interest-bearing investments"



According to Keynes, people hold money (M) in cash for three motives:

(i) Transactions motive,
(ii) Precautionary motive, and
(iii) Speculative motive.

Motive	Description
Transaction Motive	a) It is need for cash for current transaction for **personal and business exchange.** b) This need arises due to timing gap between Receipt of Income and Planned Expenditures. c) This need is further classified into- i) Income motive (for individuals & households), and ii) Trade Motive (for Business Firms).

	d) Transaction Demand is directly related to the level of Income not affected by interest rates. e) Transactions Demand (Lr) = Earnings (Y) * Ratio of income which is kept for transaction purposes (k)
Precautionary Motive	a) Individuals & businesses keep a portion of their income to finance unforeseen, unpredictable and unanticipated Expenditures. b) Precautionary demand depends on the **size of income, prevailing economic & political conditions and personal traits of the individual such as Optimism / pessimism, farsightedness etc**. c) Precautionary Motive Cash Balances are considered **Income-Elastic** and by itself **not very sensitive to Rate of Interest.**
Speculative Motive	a) This need reflects people's desire to hold cash, in order to be equipped to **exploit any attractive investment opportunity requiring cash expenditure.** i.e. to take advantage of favorable business situation b) The theory explains the portion of cash to be kept in asset portfolio depending upon the interest rate prevailing. c) Higher the interest rate, lower the speculative demand for money, and vice-versa.

Explanation:

1. According to Keynes, the demand for money = Total of Transaction demand + precautionary demand and Speculative demand.
2. According to Keynes, people demand to hold money balances to take advantage of the future changes in the rate of interest, which is the same as future changes in bond prices.
3. Keynes assumed that the expected return on money is zero, while the expected returns on bonds are of two types, namely:
   (i) the interest payment
   (ii) the expected rate of capital gain.
4. The market value of bonds and the market rate of interest are inversely related. A rise in the market rate of interest leads to a decrease in the market value of the bond, and vice versa.
5. Investors have a relatively fixed conception of the **'normal' or 'critical' interest rate R_C** and compare the **current rate of interest R_N** with such 'normal' or 'critical' rate of interest.

Situation	If current Rate (Rn) > Critical Rate (Rc)	If Current rate (Rn) < Critical Rate (Rc)
Process	Investors expect a fall in the Interest Rate (rise in Bond Prices), and now they will convert their cash into Bonds since- a) They can earn high rate of return on Bonds. b) They expect Capital Gains	Investors expect a rise in Interest Rate (fall in Bond Prices), and hence they hold their wealth in Liquid Cash because- a) Loss, i.e Interest foregone is small. b) Anticipated capital losses (fall in prices) is avoided. c) Return on Money will be high than that on Bonds,

	resulting from a rise in Prices.	Idle Cash held can be used to buy bonds at lower price and thereby.
Action	Asset Portfolio would consist only of **Bonds.**	Asset portfolio would consist wholly of **Money/Cash.**

If current & Critical Interest Rate is equal, a wealth holder is indifferent to either holding Cash or Bonds.

In short R_N will try to converge to R_C.

Individuals's Speculative Demand	Aggregate Speculative Demand
IF **Rn > Rc**, the entire wealth is held in bonds. If **Rn < Rc**, the entire wealth is held in cash / Money.	In this case discontinuity of Individual curve disappears & a continuous downward sloping function showing the Inverse Relationship between Interest Rate & Demand is obtained.

POST-KEYNESIAN DEVELOPMENTS IN THE THEORY OF DEMAND FOR MONEY

7. Inventory Approach

Baumol and Tobin developed a **deterministic theory** of transaction demand for money, known as **Inventory Theoretic Approach**, in which money or 'real cash balance' was essentially viewed as an inventory held for transaction purposes.

Explanation:

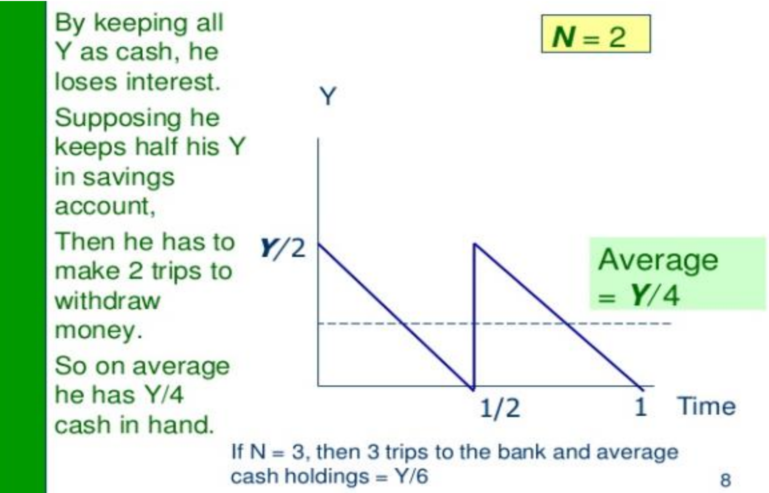
1. Inventory models assume that there are two media for storing value-
   a. money
   b. interest-bearing alternative financial asset.

2. As per Baumol, receipt of income, say Y takes place once per unit of time but expenditure is spread at a constant rate over the entire period of time. Excess cash over and above what is required for transactions during the period under consideration will be invested in bonds or put in an interest-bearing account. Money holdings on an average will be lower if people hold bonds or other interest yielding assets.
3. The factors determining demand of Money are:

Factor	Particulars
Income levels	The higher the income, the higher is the average level or inventory of money holdings
Opportunity cost/ carrying cost	Holding cash involves opportunity cost and thus they hold an optimum combination of Bonds and cash balance to minimise the opportunity cost.
Number of transactions	a) Average Transaction Balance (Money) holding is a function of the number of times the transfer between Money & Bonds takes place (i.e Transfers). b) Higher the number of transfers, lesser will be the Average

	Transaction Balance Holdings. c) Choice of number of transfers is made, determines the split between Money & Bond Holdings.
Transaction cost	Refers to fixed transfer cost per transfer. Higher the number of transactions raises the Total cost
Other assets	Availability of various interest yielding assets reduces the money holding.

4. Individual or business firms try to hold optimum cash balance so that balance between opportunity cost and transaction cost is met.
5. As per Baumol model, optimum cash balance is given by $(2AT/i)^{1/2}$.
   Where A= annual cash requirement
   T= transaction cost/ transaction
   I= interest/annum



8. FRIEDMAN'S THEORY

Milton Friedman (1956) treats the demand for money as for demand for capital assets.

Explanation:

1. To Friedman, money is a good **as any other durable consumption good** and its demand is a function of a great number of factors. These factor affects Money equally as they affect assets.
2. Friedman maintains that it is permanent income – and not current income as in the Keynesian theory – that determines the demand for money.
3. Permanent income which is Friedman's measure of wealth is the present expected value of all future income.

As per Friedman there are Four determinant of demand-

Factor	Particulars
Permanent Income	❑ Permanent Income is calculated by discounting future cash incomes. ❑ discount rate, defined as the average return on the five assets, namely ***money, bonds, equity, physical capital and human capital***
Price level	❑ If the price level rises the demand for money increases and vice versa. ❑ Thus, it's directly related to price level

Opportunity cost	❑ Nominal demand for money rises if the opportunity costs of money holdings (i.e. returns on bonds and stock) decline and vice versa. ❑ Thus, there is an inverse relationship between demand for money and opportunity cost
Inflation	❑ Nominal Demand for Money is influenced by inflation. A positive Inflation Rate reduces the real value of Money Balances, thereby increasing the opportunity cost of Money Holdings. ❑ Thus, there is an inverse relationship between demand for money and inflation

9. Demand for money as a behaviour towards risk

Basics of theory: Tobin analysed that the **Risk – Avoiding behaviour of Individuals** provided the basis-
a) for the Liquidity Preference, and
b) for a negative relationship between the Demand for Money and the Interest Rate. Thus, Demand for Money is primarily based on the Portfolio Management Principles.

Theory: According to Tobin, an individual's optimal portfolio structure is determined by-
- Risk / Reward characteristics of different assets.
- Taste of the individual in maximizing his utility consistent with the existing opportunities.

In this Theory, the Demand for Money is based on its utility as a **Store of Wealth** and an individual would hold a portion of his wealth in the form of Money in the portfolio. This is because-
- Rate of Return on holding money was more certain than the Rate of Return on holding interest earning Assets.
- It entails no capital gains or losses.
- Alternative Assets, i.e. Bonds and Equities are subject to Market Price Volatility, while money is not

This means that the rational behaviour of a risk averse economic agent induces him to invest optimally in both Bonds and Money.

The determinant of demand for money is given under

Factors	Description
Risk & uncertainty involved in buying Bonds.	a) Overall Expected Return on the portfolio would be higher if the Portfolio were all bonds. However, a risk–averse investor will be willing to exercise a trade-off and sacrifice to some extent the higher return for a reduction in risk, since money is a "Safe Asset". b) Such rational behaviour induces him to hold an optimally structured wealth Portfolio comprised of both -Bonds & Money.
Interest Rate	a) Amount of money held as an asset depends on the level of Interest rate. b) If this payment is increased, Investor is willing to put a greater proportion of the Portfolio into the Risk Asset (i.e Bonds) and thus a smaller proportion into money.

Unit 3: Supply of Money

1. Meaning and introduction

"Money supply" denotes the **Total Quantity** of **Money** available to **the people in the economy**. The Quantity of money at any point of time is a measurable concept.
Supply of Money- Stock or Flow concept-
It refers to the total amount of money **at any particular point of time**, thus it is a Stock Concept. Change in the Stock of Money (i.e increase or decrease per month or year), is a Flow Variable.

Stock of Money in General Parlance- Generally, Stock of money refers to the Stock of money available to **'Public'** as means of payments and store of value. Such stock of money is always less than the Total Stock of Money that really exists in an Economy.

Meaning of Public-

The term 'Public' includes all Economic Units-	The term 'Public' excludes Producers of Money
a) Households, Firms, and Institutions, b) Quasi-Governmental Institutions, c) Non- banking Financial Institutions, d) Non- Departmental Public Sector Undertakings, e) Foreign Central Banks and Foreign govt. d) International Monetary Fund which holds a part of Indian Money in India in the form of Deposits with RBI.	a) Government, which includes- • Central Government and • All State Governments and • Local Bodies. b) Banking System, which means • Reserve Bank of India, and • All banks that accept Demand Deposits (Note)

Rationale of measuring supply of Money in Market-
Measurement of money is important because of two reasons-

1. Money supply analysis facilitates analysis of Monetary Developments to provide a **deeper understanding of the causes of Money Growth**.
2. It is important from monetary policy perspective as it provides a framework to evaluate **whether the stock of money in market is consistent with standard for price stability** and to understand nature of **deviation from standard.**
3. Also, the other reason is to stabilize Price level and GDP growth.

2. Sources of Money supply

Supply of the money in an economy depends upon-

1. Decision of **central bank**, and
2. The **supply responses of Commercial banking system** of country wrt. to policy of central bank. Commercial banks create **Credit Money** in an economy.

There are two broad sources of Money Supply, i.e **High Powered Money**, and **Credit Money**. These are explained as under-

	High Powered Money / Fiat Money i.e. Currency issued by the Central Bank	Credit Money, i.e. Money created by Commercial Banks

1	The **Central Banks** of all the countries are **empowered to issue Currency**. Therefore, the Central Bank is primary source of Money Supply in all Counties.	Total Money Supply in the Economy is also determined by the extent of Credit created by the Commercial Banks.
2	The Currency issued by the Central Bank is **'Fiat Money'** and is backed by supporting **Reserves and its value is guaranteed** by the Government. ***	Banks create Money Supply in the process of borrowing and lending transactions with the public.
3	Quantity of Fiat Money depends on the decision of the Central bank based on the authority conferred on it.	Supply of Credit money is responses of the Commercial Banking system of the country to various policies and norms of central bank of a country.

NOTE:

a) The currency issued by the Central Bank is a liability of the Central Bank and the Government. Therefore, it must be backed by an equal value of Assets mainly consisting of Gold and Foreign Exchange Reserves.

b) In practice, most countries have adopted a 'Minimum Reserve System' wherein the Central Bank is empowered to issue Currency to any extent by keeping only a certain minimum reserve of Gold & Foreign Securities.

3. MEASUREMENT OF MONEY SUPPLY IN INDIA

In India RBI has formulates various Aggregates for measurement of Money Supply, as under. Since 1967-68 RBI has been publishing data on four alternative measures of money supply Denoted by M1, M2, M3 and M4. These are known as **Monetary Aggregates**.

The following table will explain what is included in Monetary Aggregates

Item	Computation
M1 – Narrow Money	Currency notes and coins with the Public + Net Demand Deposits of Banks (CASA Deposits) + Other Deposits of RBI. (Other than those held by government) Note: Net Demand Deposits = Total Demand Deposits **Less** Inter – Bank Deposits **(Also refer note below)**
M2	MI + Savings Deposits with Post Office Savings Banks.
M3- Broad Money	MI + Net time Deposits with the Banking System.
M4	M3 + Total deposits with Post Office Savings banks (excluding National Savings Certificates)

Different aggregates represent different level of Liquidity. **M1 being most liquid and M4 being least liquid.**

Points to be remembered-

1. Currency **includes Paper Currency Notes & Coins** with the people.
2. **Current A/c Deposits and Demand Deposits portion of Savings Deposits, all held by the 'Public'. These are also called CASA Deposits and these are the cheapest sources of finance for a Commercial Bank but excludes Inter- Bank Deposits, since they are not held by the 'Public'.**

3. **Other deposits of RBI exclude RBI's Deposits held by the Government (the Central & State Government)**

NEW MONETARY AGGREGATES and LIQUIDITY AGGREGATES- On the recommendations of the working' Group on Money (1998), RBI has started publishing 4 set of new Monetary aggregates on the basis of the Balance Sheet of the Banking Sector as per Progressive Liquidity Norms.
Reserve Money, NM1, NM2, NM3

1. **Reserve Money-** Reserve Money can be computed in two ways as under- Note: Net result is same in both.

Method 1 –	**Method 2-**
Currency in Circulation / held by public + Bankers' Deposits with the RBI - **Note:** These are Commercial Banks Deposits with RBI for maintaining Cash Reserve Ratio (CRR) & as Working Funds for clearing adjustments. +Other Deposits with the RBI	Net RBI Credit to Government +RBI Credit to Commercial Sector +RBI's Claims on Banks +RBI's Net Foreign Assets +Government's Currency Liabilities to the Public -RBI's Net Non- Monetary Liabilities.

a) Reserve Money is also known as **Central bank Money**, **Base Money** or **High-Powered Money**.
b) Management of Reserve Money is important to stabilize Liquidity, Growth & Price Level in an Economy.

Currency with the Public **Add: Demand Deposits with the Banking System** **Add: Other Deposits with RBI**
New Monetary Aggregate 1 (denoted as NMI) **Add: Short term Time Deposits of Residents (including and up-to Contractual maturity of 1 Year)**
New Monetary Aggregate 2 (denoted as NM2) **Add: Long term time deposits of Residents** **Add: Call / Term Funding from Financial Institutions**
New Monetary Aggregate 3 (Denoted as NM3) **Add: All deposits with the Post Office Savings Banks (excluding National Saving certificates)**
Liquidity Aggregate 1 (Denoted as L1) **Add: Term Deposits with Term Lending Institutions and Re-financing Institutions** **Add: Term Borrowing by Financing Institutions and Certificates of Deposits issued by Financing Institutions**
Liquidity Aggregate 2 (Denoted as L2) **Add: Public Deposits of Non- Banking Financial Companies**
Liquidity Aggregate 3 (Denoted as L3)

Note on Liquidity Aggregates - While the Instruments issued by the Bank are included in 'Money' Instruments, which are close substitutes of Money but are issued by the Non- Banking Financial Institutions, are also included in it. **(L1, L.2, L.3)**

4. DETERMINATION OF MONEY SUPPLY

The alternative approaches in respect of determination of Money Supply, are as under-

1. According to first view money Supply is determined **exogenously** by the Central Bank.
2. According to Second view money supply is determined **endogenously** by changes in the economic activities which affect people's desire to hold Currency relative to Deposits, Rate of interest etc. Indirectly.
3. Combined Behaviour Say that, Supply of Nominal Money In the economy is determined by the joint Behaviour of the Central Bank, the commercial Banks & Public. **(Money Multiplier Approach)**

Three factor as immediate determinants of money supply are-

(a) Monetary Base or High – Powered Money – Money Multiplier
(b) ratio of reserves to deposits – Credit Multiplier and
(c) ratio of currency to deposit

Factors	**Formula/ Symbol**	**Relation**	**Description**
a) Stock of High-Powered Money	H	Direct	• H (High-powered money) represents the behaviour of the **Central Bank.** • Its control over the Issue of Currency is reflected in the supply of Nominal High-Powered Money. • With all other variables unchanged, Total Supply of Nominal Money will vary directly with the Supply of Nominal High – Powered Money.
b) Ratio of Reserves to Deposits (RDR)	RDR = $\frac{R}{D}$	Inverse	• RDR (Reserves to Deposits Ratio) represents the behaviour of the **Commercial Banks,** in determining Money Supply through "Credit Money". • The behaviour of the Commercial Banks is reflected in the Ratio of their Cash Reserves to Deposits, known as the "Reserve Ratio" (RDR). • This implies that if the required ratio on Demand deposits increases, more reserves will be needed (Other factors remaining constant). And Vice-versa
c) Ratio of Currency to Deposits (CDR)	CDR = $\frac{C}{D}$	Inverse	• CDR represents the behaviour of the **General Public**, in determining Money Supply. It represents the behaviour of public to hold money in for of cash. • They influence the Nominal Demand Deposits of the Commercial Banks by their decisions in respect of the amount of Nominal Currency in hand (Money holding as Cash) designated as "Currency Ratio" (CDR). • Higher the CDR lower will be the money available with bank to create credit money and vice-versa.

These Variables are designated as the **'proximate determinants'** of the Nominal Money Supply in the Economy.

Note:

1. The higher the MB, higher the Money Supply (M).
2. The lower the Ratios (RDR & CDR), higher the 'm' and hence higher the Money Supply (M).

Money Multiplier approach to supply of money- Milton Friedman & Anna Schwartz.

Money multiplier m is defined as ratio that relates change in money supply to the given change in Monetary base. It denotes by how much money supply will change with change in monetary base

$$M = m * MB$$

Where M = Money Supply,
m = Money Multiplier Ratio, and
MB= Monetary Base (or) High Powered Money.

Credit Multiplier approach to supply of money-

1. Credit Multiplier:

a) It describes the amount of **Additional Money** created by **Commercial Bank** through the process of lending available Money in excess of the Reserve Requirement.
b) It reflects the bank's ability to increase the Money Supply.
c) It is also called "**Deposit Multiplier**" or "**Deposit Expansion Multiplier**".
d) Credit Multiplier = $\frac{1}{\text{Required Reserve Ratio}}$

Illustration: For this Illustration, assume A, B, C, D and E are all individuals and X, Y, Z are banks

- A earns 10 crore and deposits 10 crore in cash at Bank X. If the required RDR is 10%, Bank X will lend 9 crore to Benny, i.e it deposits 9 crore in B's Account, that B can now use. Now Benny owns Rs. 900. B buys goods from C and pays 9 crore to C's Bank Y. Now, Bank Y will have an increase in cash of 9 crore, which it may lend 8.1 crore to David after 10% RDR.
- D may again deposit this money it in another Bank Z. After keeping 10% as RDR, 7.29 crore can be lent out to Eminem.
- This process continues "ad infinitum" and Banks thus "create" money supply called "Credit Money".

The total of all this Money Supply will be = 1 x 10 crore = Rs. 100 crore. So, initial Deposit multiplies itself by 10 times

Impact of RDR on Money Supply & Credit Multiplier

1. RDR Impact:

a. When people deposit their money into Banks, Banks do not hold them as such. Banks create **"Credit Money"** by using the deposited money for giving Loans to individuals / Business Firms, who have to repay them to the Banking system.
b. The difference between Interest paid (to public) and Interest Earned (on Loans given) is called "Spread" and constitutes Gross Income of the Banks, from which other Expenses are met.

c. However, every rupee of Demand Deposits cannot be given away as Loans, since banks are required to hold back a portion of such deposits as **"Reserves"** to maintain Liquidity in the Banking system. This Ratio is called as **RDR (Reserves to Deposits Ratio).**

d. If Reserves increase, then Money Supply will be reduced. Hence, Money Supply is inversely related to RDR.

e. Reserves may be as the result of-

- The regulations of the Central Bank (RBI) – referred as Statutory Reserves, or
- Decisions taken by the Commercial Banks themselves – referred as Excess Reserves.

2. Impact of Statutory Reserves:

Situation	Effect on Money Supply
Central Bank decreases Statutory Reserve Ratio on Demand Deposits	There will be expansion of Loans by Banks, since lesser level of reserves can now support more Loans and Deposits. Thus, money supply will increase.
Central Bank increases Statutory Reserve Ratio on Demand Deposits	Since Reserves are needed, Banks will restrict / recall / reduce (i.e contract) their loans, causing a decline in Deposits and hence in Money Supply.
Central Bank injects money into Banking system but, these are held as Excess Reserves by the Banking System	Since they do not lead to any Additional loans, these Excess Reserves do not lead to creation of money. There will be no effect on Deposits or Currency and hence no effect on Money Supply.

3. Impact of Excess Reserves:

Excess reserve represents the additional reserve maintained by commercial bank with RBI over and above the minimum required ratio to be kept

Excess Reserve is affected by the Cost and Benefits of holding such Reserves. For this purpose-

- **Cost =** Interest that could have been earned by giving these amounts as Loans, i.e Opportunity Cost,
- **Benefit =** Assurance as to adequate liquidity in the banking system, to meet withdrawal of Deposits by Public.

These costs and benefits are influenced by two factors, viz. Market Interest Rates and Expected Deposits Outflows, which have following impact-

Situation	Effect on excess Reserves
If interest rate increases	Banks will prefer to reduce Excess Reserves and give them as Loans to have higher earnings. So, the ratio of Excess Reserves to Deposits falls.
If Interest Rate decreases	Opportunity Cost of holding excess Reserves declines and Reserves will rise.
If deposit outflows are expected to increase	Banks will want more assurance against the possibility and will increase the Excess Reserves Ratio.
If deposit Outflows are expected to decrease	Decline in Expected Deposit Outflows will reduce the benefit of holding Excess Reserves, consequently, Excess Reserves will rise.

Impact of CDR on Money Supply & Money Multiplier

CDR Concept: CDR is the ratio of money held by the public held in Currency, to that they hold in Demand Deposits with Banks.

$$CDR = \frac{\text{Currency held by Public}}{\text{Demand Deposits in Banks}} = \frac{C}{D}$$

Suppose CDR is Rs. 0.3, it means for every Rs. 100, an individual will hold Rs. 30 as currency with him, and place Rs. 70 in Commercial Banks as Demand Deposits.

Significance: CDR –

a. represents the degree of adoption of banking habits by the people, and is thus a behavioral parameter,
b. reflects people's preference for liquidity.
c. is related to the level of economic activities or the GDP growth,
d. is influenced by the degree of financial sophistication, eg.(i) ease & access of Financial Services, (ii) availability of a number of Liquid Financial Assets, (iii) Financial innovations, (iv) Institutional Factors, etc.
e. is driven by temporary factors also, eg. CDR may increase during festive seasons as people convert Deposits into Cash for meeting extra expenditure during that periods.

Impact of Other factors on Money Supply & Money Multiplier

Effect of Government expenditure on Money supply-

a) Whenever the Central and State Governments' cash balance falls short of the Minimum requirement, they are eligible to avail of the facility called **Ways & Means Advances (WMA) / Overdraft (OD) Facility.**
b) When Government incurs expenditure, it involves debiting Government balances with RBI, and Crediting the Receiver (e.g. Salary Account of Employee) Account with the Commercial Bank.
c) So, it results in generation of Excess Reserves, (i.e. excess balances of Commercial Banks with RBI).
d) Excess reserves thus created can potentially lead to an increase in Money supply through the Money Multiplier process e.g. When the Employee uses this money for making payments for purchase of goods etc.

Effect of Time deposits (Note: RDR requirements generally relate to Demand Deposits, not Time Deposits)

An increase in Time Deposit – Demand Deposit Ratio means that greater availability of Free Reserves and consequent enlargement of volume of Money Supply.

Unit 4: Monetary Policy

1. Monetary Policy

Meaning: Monetary Policy refers to the use of **Monetary Policy Instruments** which are at the **disposal of the Central Bank**, for the following objectives-
a) to **regulate** the availability, cost and use of Money & Credit,
b) to promote **economic growth,**
c) to ensure **Price Stability,**
d) to achieve **optimum levels** of output and employment,
e) to obtain Balance of Payments **equilibrium,**
f) to ensure **stable currency**, or
g) to meet **any other goal** of Government's Economic Policy
[Memory Techniques - **POGER$_{ACUC}$S**]
Or,
Monetary Policy refers to-
Action programme of the Monetary Authorities (Generally central bank)
To **control and regulate Demand & Supply** of Money with the Public and flow of credit,
With the view to **achieve predetermined** Macro-Economic **Goals**.

- Monetary Policy encompasses all actions of the Central bank which are aimed at –
  - **Directly** controlling the **Money supply**, and
  - **Indirectly** at regulating the **Demand** for Money.
- Monetary Policy is in the nature of **"demand-side"** Macro-economic Policy and works by stimulating or discouraging Investment and Consumption spending on Goods & services.

2. Monetary Policy Framework

In the execution of Monetary Policy, the Central Bank functions within a specified monetary policy Framework which has 3 components as under-
1. **Monetary Policy Objectives-** providing explicit Guidance to the Policy Makers.
2. **Analytics of Monetary Policy-** which focus on Transmission Mechanisms for implementation.
3. **Operating procedures-** which focus on operating targets and instruments.

3. Monetary Policy objectives

Monetary Policy is reflection of economic policy. So, objectives of Monetary Policy of a Country generally coincide with its overall objectives of Economic policy.

Prima Objectives: The most common objectives of Monetary Policy of the Central Banks across the World are –
- **Price Stability-** Establishment and Maintenance of stability in Prices (or controlling inflation)
- **Economic Stability-** Maintenance of Full Employment and achievement of high level of economy's growth

Other Objectives: Other Objectives which flow out of the Prima Objectives include –

1. Rapid **S**ustainable Economic Growth,
2. **D**ebt Management
3. Balance of Payments **E**quilibrium,
4. **E**xchange Rate Stability
5. Adequate flow of **c**redit to the Productive Sectors,
6. **S**tability of Long – Term Interest Rates to encourage Investments
7. Creation of an efficient Market for **G**overnment Securities.

What is an Impact of Conflicting Objectives?

Sometimes, simultaneous achievement of several objectives may create a conflict among them. For example, a Policy targeted at controlling inflation is likely to generate Unemployment. So, **based on the pre-determined National Priorities**, the Monetary Policy Makers must exercise appropriate trade-offs to balance the conflicting objectives.

Indian Scenario- RBI's Monetary policy and objectives-

1. The Reserve Bank of India Act, 1934 in its preamble sets out the objectives of RBI as "to **regulate the issue of Bank notes** and the **keeping of Reserves** with a view to securing **Monetary Stability** in India generally to **operate Currency and Credit System** of the country to its advantage".
2. Though not explicitly spelt out, the Monetary policy in India has evolved towards **maintaining Price stability** and ensuring **adequate flow of credit** to the productive sectors of the Economy.
3. Also, **other Objectives are equally relevant** for the Indian economy, such as Rapid Sustainable Economic Growth, Debt Management, Balance of Payments Equilibrium, Exchange Rate Stability, etc.

4. Analytics of Monetary Policy – Transmission Mechanism for Implementation

The process or **Channels** through which the **change of Monetary Aggregate** affects the level of **Product and Prices** is known as "Monetary Transmission Mechanism". It describes how policy – induced changes in the nominal Money Stock / Short – Term Nominal Interest Rates impact real variables like Aggregate Output and Employment.

Monetary policy influences Price Level & National Income Through the following Transmission Mechanisms,

Item	Description
Interest Rate channel	1. Increase in Interest **Rate increases the Cost of Capital & Real Cost of Borrowing** for Firms & Households. 2. Due to higher Borrowing Cost, Firms **cut back on their Investment Expenditures** and Households cut back on purchases of Homes, Automobiles, and all Durable Goods. 3. A decline in Aggregate demand results in a **fall in Aggregate Output & Employment.** Note: A decline in Interest Rates will have opposite effect through decrease in Cost of Capital.

<table>
<tr><td>Exchange Rate Channel</td><td>1. This Channel basically works through Expenditure switching between Domestic & Foreign Goods.
2. Appreciation of Domestic Currency makes Domestic Goods more expensive compared to Foreign – produced Goods. It causes Net Exports to fall, correspondingly Domestic Output & Employment also fall.
Note: Depreciation of Domestic Currency will have the reverse effect of the above.
3. This channel is applicable only for Open Economies, having International Trade.</td></tr>
<tr><td>Quantum Channel</td><td>Channel to restrict the quantity of Money flow

1. Bank lending channel: Under lending channel the access of Household and Firms are towards banks are controlled.
“Open Market Operation” (OMC) that leads to a contraction in the supply of Bank Reserves and Bank credit requires banks to reduce their lending. So, the firms dependent on Bank Loans consequently reduce their Investment Spending. Thus, there is decline in the Aggregate Output and Employment. (Note: Reverse effect happens for OMOs leading to expansion of Bank Credit.)

2. Balance Sheet Channel: As a Firm’s Cost of Credit rises, the strength of its Balance Sheet deteriorates. Increase in Interest Rates will have the following effect on the Balance Sheet –
• Direct Effect: By increase in the payments that the Firm must make to repay Floating Rate Debts.
• Indirect Effect: By reducing the Capitalized Value of the Firm’s long – lived Assets. (Refer note below)</td></tr>
<tr><td>Asset price Channel</td><td>Increase in Interest Rates makes Debt Instruments more attractive for Investors than Equities leading to a fall in Equity prices. If Stock Prices falls, it leads to reduction in Household Financial Wealth, leading to fall in Consumption, Output and Employment.
(Note: Reverse effect happens for reduction in interest rate)</td></tr>
</table>

- Under Contractionary Policy, Interest Rates rises. Under Expansionary Policy, Interest Rates reduces
- Hence, a Policy – induced increase in the Short – Term Interest Rate not only acts immediately to depress spending through the Traditional Interest Rate Channel, it also acts, possibly with a time – lag, to raise Firm’s Cost of Capital through Balance Sheet Channel. These lead to decline in Output & Employment.

Effectiveness: The effectiveness of different Channels function depends on
1. Stage of Development of the Economy, and
2. Underlying Financial Structure of the Economy.

5. Operating procedures

Operating Procedures: The day to day implementation of Monetary Policy by Central Banks through various Instruments is referred to as “Operating Procedures”. The

Operating Procedures Framework, i.e. Implementation of Monetary Policy involves 3 major aspects –

Choosing the	Meaning
Operating Target	Operating Target is the **variable** that the Monetary Policy can influence with its actions. Example: Inflation
Intermediate Target	**Intermediate Target** is a variable which the Central Bank can **hope to influence** to a reasonable degree through the **Operating Target** and which displays a predictable and stable relationship with the Goal Variables. Example: Economic Stability.
Policy Instruments	These are the various tools that a Central Bank can use to **influence Money Market** and **Credit Conditions** and pursue its Monetary Policy Objectives.

Direct vs Indirect Instruments: For implementing the Monetary Policy

Directly	Indirectly
i.e. using its Regulatory Powers, So, Direct Instruments comprise of -	i.e. using the influences on Money Market conditions as the issuer of Reserve money. It comprises-
• **Reserve Ratios** (CRR, Statutory Liquidity Reserve Ratios.) • **Directed Credit** e.g. Prescribed targets for allocations of credit of Preferred / priority Sectors (e.g. Agriculture), and • **Administered Interest Rates** wherein the Deposit and Lending rates are prescribed by the Central Bank.	• Repurchase Options (in short Repos), through LAF, • Open market Operations (OMOs) • Standing Facilities (SFS), and • Market – Based Discount Window.

6. Reserve ratios

CRR and SLR? Differentiate between CRR and SLR

Point	Cash Reserve Ratio (CRR)	Statutory Liquidity Ratio (SLR)
Meaning	Scheduled Commercial Banks should maintain a fraction of the total Net Demand & Time Liabilities (NDTL) as cash deposit with RBI. (Note 1&3)	Scheduled Commercial Banks should maintain a stipulated percentage of their Total / Net DTL in cash or Gold, or prescribed Investments. (Note 2 & 3)
Maintained with -	CRR has to be maintained as Cash with RBI. RBI does not pay any interest on such balances.	SLR requires holding of Assets in one of the 3 categories (Cash / Gold/ Investments) by the Bank itself.
Uses	a) CRR is an important quantitative tool in Liquidity Management. b) Higher the CRR, lower will be the liquidity of Banks, and vice – versa. c) During economic slowdown,	a) SLR is an important tool for controlling liquidity in the Domestic Market by manipulating Bank Credit. b) Changes in SLR chiefly influence the availability of resources in the Banking System for lending.

	RBI reduces CRR to enable to Banks to expand Credit and increases the money Supply. d) During periods of High Inflation, RBI increases CRR to contain credit expansion. RBI may set CRR in keeping with the broad objective of maintaining Monetary Stability.	c) During the high liquidity period, a rise in SLR rises the fraction of Bank's locked in eligible Instruments & thus reduces Credit Creation Capacity. During period of economic slowdown, a reduction in SLR has the opposite effect. d) SLR also facilitates an effective operating market for Government Securities.
Presently	CRR IS 4%	SLR is 19.25%
Mode	Cash balance with RBI	2. Prescribed Investments should be made in *un-encumbered Instruments* that includes- 1. Treasury – Bills of the Government of India. 2. Dated Securities including those issued by the Government of India under the Market Borrowings Programme and the Market Stabilization Scheme (MSS). 3. State development loans (SDLs) issued by the State Governments under their Market Borrowings Programme. 4. Other Notified Instruments, mainly securities issued by PSEs.

Note: It shall be noted that

- ***Non- Bank Financial Institutions (NBFIs) are outside the purview of this Reserve requirement. (Both CRR and SLR)***
- ***Failure to meet its Required Reserve Requirements would attract penalty in the form of Penal Interest charged by RBI.***

7. Borrowing facility with Banks

	Liquidity Adjustment Facility (LAF)	Marginal Standing Facility (MSF)
Objective	RBI, being a Banker's Bank, provides Liquidity to banks when it faces shortage of Liquidity. Its objective is to assist Banks to adjust their **day to day mismatches** in Liquidity. Currently, RBI provides Financial Accommodation to the Commercial Banks through	RBI, also acts as a lender of Last Resort to Commercial Banks, in suitable situations. It has been introduced by RBI with the main aim to – a) reduce volatility in the Overnight Lending Rates in the Inter – Bank Market, and b) enable smooth monetary transmission.

	Repos/ Reverse Repos under this facility.	
Facility	SCBs & Primary Dealers, in case of – • **Requirement:** avail of Liquidity from RBI, or • **Excess Liquidity:** park excess Funds with RBI, on an overnight basis against the Collateral of Government Securities including State Govt. Securities.	MSF provides a Safety Valve against unexpected Liquidity Shocks to the Banking System. It is the last resort for Banks once they exhaust all Borrowing Options including LAF.
Interest	Lower compared to MSF Repo Rate is changed only through the Monetary Policy Statements of RBI. Reverse Repo Rate will be linked to Repo Rate.	MSF Rate, being a Penal Rate, gets adjusted to a fixed percent above the Repo Rate. MSF is at present aligned with the Bank Rate.
Process	Scheduled Commercial Banks can borrow from the Discount Window against the Collateral of Securities like Commercial Bills, Govt. Securities, Treasury Bills or other Eligible Papers. (Note 1)	Scheduled Commercial Banks can borrow additional amount of Overnight Money from RBI over and above LAF Window by dipping into their SLR Portfolio upto a limit at Penal Rate of Interest.
Availability	LAF is conducted at a fixed time daily on all Working Days in Mumbai (excluding Saturdays). a) **Overnight LAF:** Repo & Reverse Repo b) **Term Repo:** Repos of 14 / 7 days duration	Banks can borrow through MSF on all working days (except Saturdays) from 7:00 pm to 7:30 pm, in Mumbai. Minimum Amount of MSF is Rs. 1 Crore and more will be available in multiples of Rs. 1 Crore.

8. Operations through Government securities

Market Stabilization Scheme (MSS) and Open Market operations (OMO)

	Market Stabilisation Scheme (MSS)	Open Market operations (OMO)
Objective	It was introduced following MOU between RBI and the Government of India with the primary aim of aiding the Sterilization Operations of RBI.	The objective of this operation is to adjust the Rupee Liquidity Conditions in the Market on a durable basis.
Process	Sterilization is the process by which the Monetary Authority (RBI) sterilizes the effects of significant Foreign Capital Inflows on Domestic Liquidity, by off – loading a portion of	It is a Market Operation conducted by RBI by way of Sale / purchase of Government Securities to/from the market.

	the Stock of Government Securities held by it.	
Impact	Government borrows from RBI (additional to its Normal Borrowing) and issues Treasury Bills / Dated Securities for absorbing the excess liquidity from the market arising from Large Capital Inflows.	During the excess liquidity conditions, RBI sells Securities thereby sucking out he Liquidity. During tight liquidity conditions, it buys Securities thereby releasing Liquidity.
Effect	MSS absorbs the excess liquidity from the market	OMO either absorbs or Injects the excess liquidity from the market

9. Repurchase transactions (Repo) and reverse Repo rate

What is Repo rate and Reverse Repo rate? Explain and differentiate between the two? What is current Repo and reverse rate

	Repurchase Transaction (Repo)	Reverse Repurchase (Reverse Repo)
Meaning	Instrument for borrowing funds by selling Securities with an agreement to re-purchase them on a mutually agreed future date at an agreed price which includes Interest for the Funds borrowed.	Instrument for lending funds by purchasing securities with an agreement to resell them on a mutually agreed future date at an agreed price which includes interest for the funds lent.
Process	Repo operation takes place when other Banks borrow Money from RBI by giving Securities to the RBI. This is the first part of the transaction. Under second part the bank re-purchase the security and pay back to the RBI along with the interest for the sum borrowed	Reverse Repo Operation takes place when RBI borrows Money from Banks by giving them securities.
Impact	Repo operations inject Liquidity into the system.	This operation absorbs Liquidity in the system.
Interest (Note)	Interest Rate charged by RBI for this transaction is called the 'Repo rate'. Higher than Reverse Repo Rate.	Interest Rate paid by RBI for such transactions is called the 'Reverse Repo Rate' less than Repo Rate.
Presently	Repo Rate is 6.25%	Reverse Repo Rate is 6%

Eligible _Securities:_ The securities transacted can be either **Government Securities** or **Corporate Securities** or any other Securities which the RBI permits for transaction. The collaterals used for Repo & Reverse Repo Operations consist primarily Government of India Securities.

Types of Repo _Markets_ operating in India: There are three types of Repo Markets operating in India presently-

a) Repo on Sovereign securities
b) Repo Corporate Debt Securities, and
c) Other Repos.

Online _System_: All these transactions are reported on the electronic platform called the Negotiated Dealing System (NDS) The Clearing corporation of India Ltd. (CCIL)

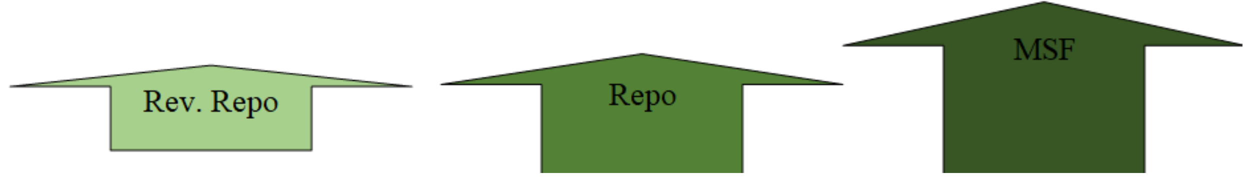
has put in an anonymous Online Repo Dealing System in India, with an anonymous order matching Electronic Platform.

10. Interest band

MSF (6.5%) is the upper band of Interest Corridor. Repo Rate is at the middle & Reverse Repo at the lower band. MSF & Reverse Repo Rate determine the corridor for daily movement in the movement in Weighted Average Call Money Rate.

11. Policy rate and bank rate

What is policy rate and what is bank rate? Explain meaning and difference



	Policy Rate (Repo Rate)	Bank Rate
Meaning	Fixed Repo Rate quoted for sovereign Securities in the overnight segment of LAF is considered as the Policy Rate. (India has many other Repo Rates in operation)	It is the Standard rate at which RBI is prepared to buy or re-discount Bills of Exchange or other Commercial Paper Eligible for purchase under the Act. (RBI Act)
Significance	RBI uses this rate for balancing liquidity. Its change gets transmitted through Money Market to the entire Financial System & alters all other Short-Term Interest Rates & Influences aggregate Demand – key determination of level of Inflation & Economic Growth.	Once this rate was used as the policy rate in India. Discounting / Re- discounting of Bills of exchange by RBI has been discontinued on introduction of LAF. So, it has become dormant as an instrument of Monetary Management. Now, it has been aligned to MSF Rate.
Change in Rate	If RBI wants to make it more expensive for banks to borrow money, it increases the Repo Rate. Similarly, if it wants to make it cheaper for Banks borrow money, it reduces the Repo Rate. In other words, an increase in the Repo Rate will lead to higher Liquidity and vice – versa, other things remaining constant.	When MSF Rate changes alongside Policy Repo Rate changes, it also changes automatically. So, MSF assumes the role of Bank Rate and currently the Bank Rate is purely a signaling Rate & most Interest Rates are delinked from it. Now, it is used only for calculating penalty on default in maintenance of CRR & SLR.

12. Monetary Policy Framework agreement

Aspect	Description
Monetary Policy Framework Agreement	1. It is an Agreement reached between the Government of India and RBI on the Maximum tolerable Inflation Rate that RBI should target to achieve price stability. 2. The amended RBI 2016 Act provides for a statutory basis for the implementation of the 'Flexible Inflation targeting Framework'. 3. Announcement of an Official Target Range for Inflation is known as Inflation Targeting. 4. RBI abandoned the **'Multiple Indicator'** Approach and made Inflation Targeting the primary objective of its Policy.

Inflation Target	1. Inflation target is set once in every 5 years. 2. Central Government has notified 4% Consumer Price Index (CPI) Inflation as the target for the period from 5 August 2016 to 31 March 2021 (Upper Tolerance Limit – 6%, Lower Tolerance Limit – 2%) 3. RBI is mandated to publish a Monetary Policy report every 6 months, explaining the Sources of Inflation and the Forecast of Inflation for the coming period of 6 – 18 months. 4. Following Factors are notified by the Central Govt. as constituting failure to achieve Inflation Target – • Average Inflation > Upper Tolerance Level of Inflation Target for any 3 consecutive quarters, or • Average Inflation < Lower Tolerance level for any 3 Consecutive Quarters. 5. CPI is chosen for Inflation Target, since it closely reflects cost of Living and has larger influence on Inflation Expectation compared to other Indicators / Anchors.

13. Monetary Policy committee

Constitution of MPC (6 Members)	1. RBI Governor (Chairperson) 2. RBI Deputy Governor in charge of Monetary Policy. 3. One official nominated by the RBI Board. 4. Three Central Government Nominees representing who are persons of ability, integrity and standing, having knowledge and intelligence in the field of Economics or Banking or Finance or Monetary Policy.
Role of MPC	MPC shall – 1. determine the Policy Rate required to achieve the Inflation target. 2. formulate the Monetary Policy.
Process	1. Fixing of the Benchmark Policy Interest rate (Repo Rate) is made through debate and majority vote by this panel of experts. 2. Thus, RBI will follow a more consultative and participative system to incorporate diversity of views, specialized experience, independence of opinion, representativeness of opinion, accountability. 3. The views of Key Stakeholders in the Economy and analytical work of RBI contribute to the process for arriving at the decision on the Policy Repo Rate.

Hierarchy Policy Implementation of RBI

1. RBI's Monetary Policy Department (MPD) assists Monetary Policy Committee (MPC) in formulating the Monetary Policy
2. MPC formulates the Monetary Policy by determining the Policy Rate required to achieve the Inflation targets.
3. Financial Markets Operation department (FMOD) operationalizes the Monetary Policy mainly through the day to day Liquidity Management Operations.
4. Financial Markets Committee (FMC) meets daily to review the Liquidity Conditions so as to ensure that the operating Target of Monetary Policy (Weighted Average Lending Rate) is kept close to policy repo Rate

14. Challenges in Implementation of Monetary policy

Following are the main challenges in implementation of Monetary Policy

1. Rudimentary and Non – competitive Financial System
2. Lack of Integrated Money and Inter – Bank Markets,
3. Uncertainties surrounding the economy, due to both Internal & external sources.
4. Issues related to Operational Autonomy of the Central Bank
5. Extent of co-ordination between Fiscal and Monetary authorities.

Chapter No. 4: International Trade
Unit 1 – Theories of International Trade

What is International Trade

International trade is the exchange of goods and services as well as resources between countries. It involves transactions between residents of different countries in multiple currencies. Compared to internal trade, international trade has greater complexity.

Distinction between International Trade and Domestic trade

Point	International Trade	Domestic Trade
Meaning	Exchange of goods, services, resources etc. between / amongst different countries.	Exchange of goods, services, resources, etc within domestic territory of a country.
Persons	Transactions between Residents of different countries.	Transactions between / amongst Residents of the same country.
Currency	2 or more currencies are involved.	Only one currency (Local Currency) is involved.
Regulations	This involves multiple Legal Systems, detailed documentation, procedural formalities, Trade Barriers, Shipping and Transportation issues etc.	This involves law of only one country and less documentation and procedural formalities.
Tariff	Customs Tariff is applicable.	Domestic Tariff/ taxes are applicable.

Advantages of International trade / Globalization/ Advantage of Liberalisation

1. **Cost Efficiency:** Economic efficiency increases due to quantitative and qualitative benefits of extended division of labour, economies of large-scale production, betterment of manufacturing capabilities and other factors
2. **Wide range of Products:** International trade enables consumers to have access to wider variety of goods and services that would not otherwise be available.
3. **Innovation:** Trade necessitates increased use of automation, supports technological change, stimulates innovations, and facilitates greater investment in research and development and productivity improvement in the economy.
4. **Employment:** Trade creates International Employment Opportunities by boosting economic sectors that create stable jobs and usually higher incomes, thus improving livelihoods.
5. **Competition:** Increase in competition reduces the chances of Domestic Monopolies, and is beneficial to the public.
6. **There are other benefits such as Material at Cheaper cost, Better Standards, Peace and Stability, Diversification, Labour Mobility, price stability, etc.**

Disadvantages of International trade/Globalization/ Liberalisation

1. **Negative Impact on Labour class:** Due to import of automated technologies, which reduces the Labour involvement in production, the demand for un-skilled, semi-skilled labour falls and this results into depression and unemployment.
2. **Exploitation of Resources:** Excessive importance for Exports leads to **unsustainable production and consumption,** thereby depleting natural resources at a higher rate.
3. International Trade **threatens local infant industries** through stiff competition.
4. **Recession** in one country may be **transmitted** and passed on to another country, leading to overall depression.
5. Excessive exports may cause shortages of many commodities in the exporting countries and lead to high inflation (e.g. onion price rise in 2014).
6. **Unwanted and harmful goods** may be imported into a country. (Example- Dumping of Chinese Products)
7. **Disturbs the Sovereignty of nation, Negative impact on Culture, Lack of Transparency** are some of the other disadvantages

Explain the Following element individually as an underlying reason that explains difference among Nation?

Factor	Reason
Domestic Economy	If the Domestic economy is more competitive, they are likely to be more productive and competitive abroad.
Internalisation	Internationalisation refers to Openness for international activities. Higher the rate of internalisation, higher is the productivity and better standard of living.
Government	With Minimum intervention of State and Maximum cooperation, domestic economy can flourish. Favourable government policies, Predictable future reduces the uncertainties and favours the trade
Finance	A well developed internationally integrated financial sector in country supports its international competitiveness. The efficiency of finance sector is measured by ***narrowness of spread between buying and selling*** rate of interest
Infrastructure Science and Technology	A well-developed infrastructure and innovative application of Science and technology supports economic activities.
Management	A level of efficient entrepreneurship and skill for integration and differentiation of business activities reflects management ability.
Quality of people	A skilled labour force with the positive attitude increases a country's productivity and competitiveness. Education, technical ability of labour, quality of management and efficiency all contributes to competitiveness.

Theories of International Trade

1 Mercantilist Approach

2 Absolute Advantage Adam Smith

3- Theory of Competitive Advantage- David Ricardo

4- Comparative Advantage with Opp. Cost- Haberler

5- Heckscher Ohlin Theory

6- New Trade Theory

Mercantilist approach- 17th and 18th century

1. This approach advocated **that a country can grow richer and prosperous, by accumulating Gold and other precious metals,** and hence required a Country to export more and get Gold, Silver and More Precious Metals in return thereof.
2. Hence, **Exports were viewed favorably** if they resulted in inflow of Gold, while Imports were not considered conducive for Balance of economic growth, since it resulted in outflow of Gold.
3. As per this approach one country can grow economically, only at the expense/ detriment of another, and there is no **"win-win"** favorable situation in International Trade. The Trade according to Mercantilism is **"Zero-Sum Game"**, as one country's gain is the other Country's loss. (loss of one party = Gain of other party)

Theory of Absolute advantage- *(they get more from international trade from what they can get doing production individually)*

1. Theory of Absolute Cost Advantage was propounded by ***Adam Smith***
2. Under this Theory, an exchange of goods will take place **only if each of the two countries can produce one commodity at an absolutely lower production cost than the other country**.
3. Each Country which has an absolute advantage over another country in the production of **an item**, can trade such item, and hence gain in terms of International Trade.
4. Absolute Advantage refers to the ability of a Party (an Individual, a firm, or Country) to produce more of a good or service than the competitors, using the same amount of resources.

Explanation: Consider two countries (Alpha and Beta), and two Products, (X and Y). The countries have different abilities to produce goods and accordingly the production varies as under –

	Product X	**Product Y**
Country Alpha	6 Units per hour	4 Units per hour
Country Beta	1 Units per hour	5 Units per hour

- Here country Alpha is better equipped to produce Product X (6 Units vs 1 Units), whereas Country Beta is better equipped to produce Product Y (5 units vs 4 units)
- Both countries will gain by trading with one country, by which Country Alpha will specialize in Product X, and Country Beta will specialize in Product Y.
- **If Specialization takes place** but there is no international trade, Residents of Country Alpha will not have Product Y, and Residents of Country Beta will not have Product X at all. This situation is avoided by engaging in International Trade.
- ***Gains may not always be distributed equally between countries A & B, say if 1 Unit of X is traded for 1 unit of Y.***

Advantages and disadvantages of theory:

Advantages	**Disadvantages**
Each country which has an absolute advantage over another Country in the production of an item, and hence gain	It is too simplistic a model to consider. It does not recognize many practical barriers to International Trade.

in terms of International Trade.	
This Theory recognizes the importance of division of labour, specialization, and consequent benefits.	Labour is considered as the only factor Input in the analysis of Absolute Advantage. It ignores capital component
Global output is maximized, and all products are available to Consumers of all countries.	It does not consider situations where one country has absolute advantage over another country in two commodities and the second country has absolute disadvantage over the first country in both commodities.
	It emphasizes only Supply – side conditions (Production), and ignores domestic demand in respective countries.

Analysis of How the countries will be benefited with International trade
Suppose each country is given 6 Hours for production. It is assumed that both the countries are in need of product X and Product Y

Without International Trade	With International Trade

Comparative advantage theory- Ricardo's Theory

1. ***David Ricardo*** developed the classical theory of comparative.
2. The law of comparative advantage states that ***even if one nation is less efficient than (has an absolute disadvantage with respect to) the other nation in the production of all commodities, there is still scope for mutually beneficial trade***.
3. The first nation should specialize in the production and export of the commodity in which its ***absolute disadvantage is smaller*** (this is the commodity of its comparative advantage) and import the commodity in which its absolute disadvantage is greater (this is the commodity of its comparative disadvantage).
4. Comparative advantage differences between nations are explained by ***exogenous factors*** which could be due to the differences in national characteristics.
5. Labour differs in its productivity internationally and different goods have different labour requirements.

Assumptions and conclusion:

1. Labour is the only factor of Production.
2. Factors of Production are perfectly mobile within the country and imperfectly mobile between the countries.
3. Each country that has a comparative advantage over another country in the production of an item, can trade such item, and hence gain in terms of International Trade. One country's Gain need not be another country's Loss.
4. Trade can take place, even if one country has absolute disadvantage in both products.

5. This theory recognizes the importance of division of labour, specialization and consequent benefits.
6. Global output is maximized, and all products are available to Consumers of all countries.

Explanation:

Consider two countries (A and B) and two products (X and Y) with the following assumptions- Production details of the same is given below

Time required for 1 unit of	Product X	Product Y
Country A	40 Hours	45 Hours
Country B	60 Hours	50 Hours

1. Calculation of Output per Hour (1/data in the table above)

	Product X	Product Y
Country A	0.025	0.022
Country B	0.017	0.020

2. Country A is better in production of both the product X and Y compared to country B, on the basis of time taken to produce one unit of each commodity.
3. Analysis of comparative advantage

	Product X	Product Y	Calculation of Opportunity cost
Country A	40 hours pu = 0.025 uph	45 hours =0.022 uph	$\frac{1}{40}X = \frac{1}{45}Y$ Therefore, Y So, 1X = 0.89Y (or) 1.125X=1Y
Country B	60 hours pu = 0.017 uph	50 hours = 0.020 uph	1/60X = 1/50Y So, 1X = 1.20Y (or) 0.83X = 1Y
Comparative Cost Ratio	$\frac{60}{40} = 1.5$	$\frac{50}{45} = 1.11$	International Terms of Trade may be IX = IY or as agreed subject to Exchange Rates, etc.

(Absolute advantage wali country jisme zyda better hai who produce karegi aur specialize karegi, aur jo country second hai who jisme kam kharab perform karegi who export karegi)

4. Application of Comparative Advantage Theory

Point	Impact on Country A	Impact on Country B
Production Decision	Country A has higher comparative advantage in producing "x" Hence, Country A will specialize in production of "X" and export it to Country B.	Country B has comparative disadvantage in both "X" and "Y" but its disadvantage is least in "Y" So, it will specialize in the of "Y" and export it to Country A.
Resources Transfer	Instead of producing 0.89 units of "Y" each hour of Labour will be used for producing 1 unit of "X"	Instead of producing 0.83 units of "X" each hour of Labour will be used for producing 1 unit of "Y"
If terms of International trade is 1X=1Y	• Instead of 0.89 units of "Y" each hour is now used to produce 1 unit of "X" which is exchanged with Country B for 1 unit of "Y".	• Instead of 0.83 units of "X" each hour is now used to produce 1 unit of "Y" which is exchanged with Country B for 1 unit of "X"

	• Net Gain to A = 1 – 0.89 = 0.11 units of “Y”.	• Net Gain to B = 1 – 0.83 = 0.17 units of “X”

5. The difference between 1.20 Y and 0.89 Y = 0.31 Y represents the Total Gains from International Trade, to be shared between the Countries based on the terms of exchange. Similarly, The range from 0.83X to 1.125X represents the Total Gains from International Trade, to be shared between the Countries based on the terms of exchange (For product X)

Advantages	Disadvantages
Trade can take place, even if one country has absolute disadvantage in both products.	It is too simplistic a Model to consider. It does not recognize many practical barriers to International Trade.
One country’s Gain need not be another country’s Loss.	Labour is considered as the only Factor Input in the analysis of Absolute Advantage.
This theory recognizes the importance of division of labour, specialization and consequent benefits.	It emphasizes only Supply-side conditions and ignores domestic demand in respective countries.(agar demand hi nai hogi toh kya karoge)
Global output is maximized, and all products are available to Consumers of all countries.	

Comparative advantage theory with opportunity cost

a. David Ricardo’s Theory of Comparative Cost Advantage focusses only on assumption that Labour is the only factor of production. It ignores the concept of Opportunity Costs.
b. In 1930s Haberler refined the Comparative cost Advantage Theory with the introduction of Opportunity Costs.
c. Accordingly, each country will specialize and export the Product in which it has **lower Opportunity Costs.**

The above example will hold good and same can be used to study this theory.

HECKSHER-OHLIN theory (H-O Theory)

1. This theory is also known as **factor-endowment theory of trade or Modern Theory of Trade.**
2. **Meaning of factor endowment- Availability of usable resources** including both natural and man-made means of production. The Heckscher-Ohlin theory of trade states that comparative advantage in cost of production is explained exclusively by the differences in factor endowments of the nations. And international trade occurs because different countries have different factor endowment**.**
3. The Heckscher-Ohlin (H-O) model studies the case that **two countries have different factor endowments under identical production function and identical preferences**. The difference in factor endowment results in two countries having different factor prices in **the beginning.** Consequently, H-O model implies that the two countries will have different cost functions.
4. According to this theory, international trade is but a **special case of inter-regional trade**.
5. The theory states that a country’s exports depend on its **resources endowment** i.e. whether the country is capital-abundant or labour-abundant. If a country is a

capital abundant one, it will produce and export capital-intensive goods relatively more cheaply than another country. Likewise, a labour-abundant country will produce and export labour-intensive goods relatively more cheaply than another country. The labour-abundant countries have comparative cost advantage in the production of goods which require labour-intensive technology and by the same reasoning, capital-abundant countries have comparative cost advantage in the production of goods that need capital-intensive technology.

6. The Heckscher-Ohlin Trade Theorem establishes that **a country tends to specialize in the export of a commodity whose production requires intensive use of its abundant resources** and **imports a commodity whose production requires intensive use of its scarce resources**. (this is the crux of the theory).

Factor Equalisation Theorem: -

The Factor-Price Equalization Theorem states that international trade **tends to equalize the factor prices between the trading nations**. In the absence of foreign trade, it is quite likely that factor prices are different in different countries. International trade equalizes the absolute and relative returns to homogenous factors of production and their prices. In other words, the wages of homogeneous labour and returns to homogeneous capital will be the same in all those nations which engage in trading.

Difference between Classical Theory and factor endowment theory

	Comparative Cost Theory	Factor Endowment Theory
Basis	Based on Labour Theory of Value	Based on Factor Endowment of Nations.
Domestic vs International Trade	International Trade is considered as distinct and different from Domestic Trade.	International Trade is considered as an extension (special case) of inter – regional trade.
Reason for Trade	Comparative Cost Advantage of Nations	Comparative Factor Endowment of Nations.
Factors of production	Labour is considered as the only factor of production.	Labour and capital are considered as the factors of production. (2- Model)
Reason of Cost Variations	Comparative Advantage arises due to superior skills and techniques of workers.	Comparative advantage arises due to relative differences in availability of resources. Factor Prices, and Factor Requirements for Production.
Focus on	Comparative Costs of Goods only.	Cost of Goods, and the underlying reason, i.e Factor Prices and their variations.

New Trade Theory

NEW TRADE THEORY (NTT)

Concept: New Trade Theory developed in the late 1970s and early 1980s is a collection of economic models in International Trade which focuses on the role of increasing returns to scale and network effects.

NTT explains that there are two reasons for advantages to countries by engaging in International Trade.

Economies of scale- supply side	Network effect – demand Side

1. Certain goods are preferred to be produced in a country, due to Govt. Policies, factor inputs, or other resources. 2. Higher Production of these goods results in lower costs per unit, and hence such goods 3. Should be sold in local and foreign markets (i.e. exported) 4. Other Goods which do not enjoy such Low Cost of Production, should be imported.	1. A Network effect (also called Network Externality) is the effect that one user of a good or service has on the value of that product to others. 2. When a Network Effect is present, the value of a product or goods service is dependent on the number of others using it. Higher the users, higher the value. 3. Example: Online Social Networks, Mobile Phones etc. 4. Over time, positive network effects can create a Bandwagon effect as the network becomes more valuable

Unit 2 – Instruments of Trade Policy

Basics

Meaning of Trade policy:
Trade policy encompasses all instruments that governments may use to ***promote or restrict imports and exports***. Trade policy also includes the approach taken by countries in trade negotiations.

Objectives:
The main purpose of trade policy is typically to ***restrict imports and/or encourage exports.***
Other objectives include:
1. The highest possible degree of free trade.
2. An efficient internal market and open trade policy.
3. A strengthened multilateral trade system the world trade organization (WTO)
4. Increasing trade among different countries and greater investment.

Tariff

Tariffs, *also known as customs duties*, are basically *taxes or duties* imposed on goods and services which are imported or exported. Tariffs are often identified with import duties.

Purpose of tariff: Tariffs are aimed at altering the relative prices of goods and services imported. Tariffs leave the world market price of the goods unaffected.
1. ***To protect the domestic import-competing industries.***
2. ***The main goals of tariffs are to raise revenue for the government.***
3. Discourage import consumption of G&S **(Swadesi apanao)**
4. Decrease the volume of imported goods in a country.
5. To restrict trade by increasing price of imported G&S

There are few disadvantages of imposing tariff
1. ***Reduction in consumer well- being***, due to higher cost of imported goods
2. ***Increase in prices by Domestic Producers*** of same item even if it is produced at lower cost in country just to match with high cost of imported goods,

3. ***Encourages inefficient production*** in Home Country and discourage efficient production in the rest of the world.

Forms of Import Tariff

Based on Manner of Computation

Types	Description
Specific Tariff **(irrespective of Value)**	A specific tariff is an import duty that assigns a **fixed monetary tax per physical unit** of the good imported. It is calculated on the basis of a unit of measure, such as weight, volume, etc. of the imported goods e.g. A specific tariff of Rs. 1000/ may be charged on each imported bicycle.
Ad valorem **(on value)**	An *ad valorem* tariff is levied as a **constant percentage of the monetary value** of one unit of the imported good. A 20% ad valorem tariff on any bicycle generates a Rs.1000/ payment on each imported bicycle priced at Rs.5,000/ in the world market; and if the price rises to Rs. 10,000, it generates a payment of Rs.2,000/.
Mixed Tariffs	1. It is the combination of **Specific tariff** or **Ad Valorem** tariffs. 2. Mixed tariffs are expressed either on the basis of the value of the imported goods (an ad valorem rate) or on the basis of a unit of measure of the imported goods (a specific duty) depending on which generates the most income (or least income at times) for the nation. For example, duty on cotton: 5 per cent *ad valorem* 0r Rs. 3000/per ton, whichever is higher.
Compound Tariff or a Compound Duty	1. Ad valorem + specific tariff. : Fixed + Variable 2. That is, the tariff is calculated on the basis of both the value of the imported goods (an ad valorem duty) and a unit of measure of the imported goods (a specific duty). It is generally calculated by adding up a specific duty to an ad valorem duty. For example: duty on cheese at 5 per cent *ad valorem* plus 100 per kg.
Technical Tariff	1. Duty is calculated on the components of the imported item 2. Separate Duty Rate may be applied on each component of the item. E.g. Rs. 3000/ on each solar panel plus Rs.50/ per kg on the battery.
Tariff Rate Quotas	TRQ combines two aspects – Just Like Income Tax slabs a) **Quota,** i.e low or nil rate duty on imports up-to a specified limit, and b) Higher Rate on tariff on Imports beyond the specified limit.
Variable Tariff:	A duty typically fixed to bring the price of an imported commodity up to the domestic support price for the commodity. *(Adjusted according to intention, whether to promote or discourage international trade)*
Escalated Tariff	1. Duty Rates on raw materials, semi processed goods and final products are **progressively higher.** 2. This method ensures protection of domestic processing industries if Raw materials originate in the Home country, by making semi processed and final goods costlier. 3. This type of tariff is discriminatory as it protects manufacturing industries in importing countries and dampens the attempts of developing manufacturing industries of exporting countries. 4. For example, a four percent tariff on iron ore or iron ingots and twelve percent tariff on steel pipes.
Prohibitive tariff	A prohibitive tariff is one that is set so high that no imports will enter. E.g. 200% import duty on luxury cars

Anti-dumping Duties	1. It is applicable when article is **imported at less than its nominal value**, foreign seller dumps goods in a country at less than sale prices in his market, or less than Full average cost. 2. Why ADD is levied? a) Constitutes international price discrimination. b) Harms the domestic producers of the importing country. c) Creates monopolies. d) Promotes consumption of foreign goods at undesirable levels. e) Affects national interest in certain situations. *For example: In January 2017, India imposed anti- dumping duties on color-coated or pre-painted flat steel products imported into the country from China and European nations for a period not exceeding six months and for jute and jute products from Bangladesh and Nepal.*
Safeguard Duties	It is a form of duty levied to avoid import of increased quantities and in conditions to cause serious injury to the Domestic Industry. (There may be genuine case where the other country is not dumping their product but actually producing at lower cost. This will still create negative effect in domestic economy of importing company.
Counter-vailing Duties	1. It is levied on imports from any country which pays directly or indirectly***, any subsidy on the manufacture, production*** etc. of an article 2. These duties seek to offset the artificially low prices charged by Foreign Sellers, on account of subsidies and concessions offered to them in their home Country. 3. For example, in 2016, in order to protect its domestic industry, India imposed 12.5% countervailing duty on Gold jewellery imports from ASEAN *(Jitni subsidy- utna tax)*

Based on Agreement arrangements

Item	Description
MFN Tariffs	1. MFN tariffs are what countries promise to impose on imports from **other members of the WTO**, unless the country is part of a preferential trade agreement (such as a free trade area or customs union). 2. This means that, in practice, MFN rates are the **highest** (most restrictive) that WTO members charge one another. Some countries impose higher tariffs on countries that are not part of the WTO.
Preferential tariff	1. Under **Preferential Tariff** countries promise to give another country's products lower tariffs than their MFN rate. 2. A lower tariff is charged from goods imported from a country which is given preferential treatment. Many time even **nil rate.** 3. Examples are preferential duties in the EU region under which a good coming into one EU country to another is charged zero tariffs
Bound Tariff	4. A bound tariff is a tariff which a WTO member binds itself with a **legal commitment not to raise it above a certain level.** 1. The bound rates are specific to individual products and represent the maximum level of import duty that can be levied on a product imported by that member. 2. A member is always free to impose a tariff that is lower than the bound level. Once bound, a tariff rate becomes permanent and a member can only increase its level after negotiating with its trading partners and compensating them for possible losses of trade.

Applied Tariff	1. An 'applied tariff' is the duty that is actually charged on imports on a most-favored nation (MFN) basis. 2. Applied tariff can also be lower than Bound tariff.

Non-Tariff Measures (NTM) and Non-tariff barriers (NTB)

Non-Tariff Measures (NTM)- These are policy measures, other than Ordinary Custom Tariff, that can have an effect on international trade in goods, changing quantities traded or prices, or both. NTMs include regulations that **restrict trade** or that **facilitate higher trade**. These have a wider scope.

Non-tariff barriers (NTB)- Non-tariff barriers which are **simply discriminatory non-tariff measures** imposed by governments to favor domestic over foreign suppliers NTBs are oriented only **towards restricting imports**. Thus, lower in scope.

Non-Tariff Measures (NTM)

Description
Technical Measures: **Meaning**- Technical measures refer to ***product-specific properties such as characteristics of the product, technical specifications and production processes***. These measures are intended for ensuring product quality, food safety, environmental protection, national security and protection of animal and plant health. **TYPES OF TECHNICAL NTMs** **Technical Barriers to Trades- (TBT)** 1. Technical Barriers to Trade (TBT) cover **both food and non-food traded products.** 2. It refers to mandatory 'Standards and Technical Regulations' that define the specific characteristics that a product should have, such as its size, shape, design, labeling / marking / packaging, functionality or performance and production methods. 3. Any product that does not confirm to the standard, cannot be imported. 4. Some examples of TBT are: food laws, quality standards, industrial standards, organic certification, eco-labeling, marketing and label requirements. **Sanitary and Phytosanitary (SPS) Measures** 1. SPS measures are applied to protect human, animal or plant life from risks arising from additives, pests, contaminants, toxins or disease-causing organisms and to protect biodiversity. 2. These include ban or prohibition of import of certain goods, all measures governing quality and hygienic requirements, production processes, and associated compliance assessments. For example; prohibition of import of poultry from countries affected by avian flu, meat and poultry processing standards to reduce pathogens, residue limits for pesticides in foods etc.
Non-technical Measures: **Meaning-** Non-technical measures relate to trade requirements; for example***; shipping requirements, custom formalities, trade rules, taxation policies***, etc. It is further distinguished as- 1. ***Hard measures*** (e.g. Price and quantity control measures), 2. ***Threat measures*** (e.g. Anti-dumping and safeguards) and 3. ***Other measures*** such as trade-related finance and investment measures.

Furthermore, categorization also distinguish between-

1. ***Import-related measures***- imposed by the importing country, and
2. ***Export-related measures***- imposed by the exporting country itself.
3. ***Procedural obstacles (PO)*** which are practical problems in administration, transportation, delays in testing, certification etc. that may make it difficult for businesses to adhere to a given regulation.

TYPES OF NON-TECHNICAL NTMs

Import Quotas

1. **Import quota** is a direct restriction which specifies that only a certain physical amount of the good will be allowed into the country during a given time period, usually one year.
2. **Binding Quota** is set below the free trade levels of imports, is enforced by issuing licenses.
3. **A Non – Binding Quota** is set at or above free trade level of imports and does not affect trade much.
4. **Absolute Quotas** of a permanent nature limit the quantity of imports to a specified level during a specified period of time and the imports can take place any time of the year. No condition is attached to the country of origin of the product. For example: 1000 tonnes of fish import of which can take place any time of the year from any country.
5. **A Tariff Rate Quota** When country allocation is specified, a fixed volume or value of the product *must originate in one or more countries*. Example: A quota of 1000 tonnes of fish that can be imported any time of the year, but where 750 tonnes must originate in country A and 250 tonnes in country B.
6. **Unilateral Quota,** a country unilaterally fixes a ceiling on the quantity of the import of a particular commodity.
7. **A Bilateral Quota** results from negotiations between the importing country and particular Supplier Country, or between the Importing Country and export groups within the supplier Country.

Export Quotas

A quota on the export of a product from a country may be imposed if the Government feels that exports in excess of that will affect interests of the domestic consumers.

Licensing

Prospective Importers are required to apply and obtain a license from the Licensing Authorities. The possession of an Import License is necessary to obtain the Forex to pay for the imports. Licensing seeks to limit the quantities of goods to be imported.

Distribution Restrictions:

1. Distribution restrictions are limitations imposed on the distribution of goods in the importing country involving additional license or certification requirements.
2. These may relate to geographical restrictions or restrictions as to the type of agents who may resell.
3. For example: a restriction that imported fruits may be sold only through outlets having refrigeration facilities.

Service Restrictions

Producers may be restricted from providing after- sales services for exported goods in the importing country. Such services may be reserved to local service companies of the importing country.

State Trading

1. These measures grant exclusive privileges an special preferences to a few Operators/ Agencies.
2. These include Govt. imposed Special Import Channels or compulsory use of National Services.
3. Example: Export/ Import Trade in certain goods is handled exclusively by certain specialized Agencies being State Enterprises eg. State Trading Corporation. All these items imported into such a country or items exported from it are canalized through these Agencies.

Local Content Measure

1. These measures include rules on local content requirements that mandate a specified fraction of a final good should be produced domestically.
2. Requirement to use certain minimum levels of locally made components, (25 percent of components of automobiles to be sourced domestically)
3. Restricting the level of imported components, and
4. Limiting the purchase or use of imported products to an amount related to the quantity or value of local products that it exports. (A firm may import only up to 75 % of its export earnings of the previous year)

Financial Measure

1. These seek to increase import costs, through measures like-
2. Advance payment requirements, foreign Exchange Controls, i.e. denying the use of forex for certain countries/ goods.
3. For example, an importer may be required to pay a certain percentage of the value of goods imported three months before the arrival of goods or foreign exchange may not be permitted for import of newsprint.

Rule of origin

Rules of origin are the criteria needed by governments of importing countries to determine the national source of a product. Their importance is derived from the fact that duties and restrictions in several cases depend upon the source of imports.
E.g. China may dump its cheap product through export from any European country. Thus, source rule may eliminate this threat.

Embargos

An embargo is a total ban imposed by government on import or export of some or all commodities to particular country or regions for a specified or indefinite period.
This may be done due to political reasons or for other reasons such as health, religious sentiments. This is the most extreme form of trade barrier.

Procedural Obstacles

There are procedural obstacles which increase the transaction costs thereby discouraging imports e.g. Licenses, Administrative Delay, Permission of Foreign Exchange Remittance etc.
These include specifying conditions as to “Rules of Origin” certificate e.g. The country / source from which the item is imported. The cost of obtaining this certificate discourages imports.

Exports related Measures

1. Export Subsidies

1. Governments or government bodies also usually provide financial contribution to domestic producers in the form of grants, loans, equity infusions etc. or give some form of income or price support.
2. This is done to promote exports, and to make the product competitive in the global market.
3. Indirect taxes paid locally on the Materials used in the production of Exported Product, may be refunded in the form of Refund, Duty Drawback, Duty-free supply of Intermediates etc.
4. Sometimes, Direct Tax Concessions may also be granted to exporters.

2. Export tax

An export tax is a tax collected on exported goods and may be either specific or ad valorem. The effect of an export tax is to raise the price of the good and to decrease exports. Since an export tax reduces exports and increases domestic supply, it also reduces domestic prices and leads to higher domestic consumption.
E.g. Mangoes get higher price in international market and the farmers are induced to export entire output in International Market. Imposing Export duty will discourage the export and make goods available for Home consumption

3. Ban on exports

Certain items are always specifically banned from export. During periods of shortages in home country, specified products are banned from being exported, so as to make them available for home consumption.

4. Voluntary Export Restraints (VERs)

1. Voluntary Export Restraints (VERs) refer to a type of ***informal quota administered by an exporting country voluntarily restraining the quantity of goods that can be exported out of that country during a specified period of time.***
2. Such restraints originate primarily from ***political considerations*** and are imposed based on negotiations of the ***importer with the exporter***.
3. The reason for the exporter to agree to a VER is to ***avoid*** the effects of possible

Unit 3 – Trade Negotiation

retaliatory trade restraints that may be imposed by the importer.
4. VERs may arise when the import-competing industries seek protection from a surge of imports from particular exporting countries.

Trade Agreement

Trade negotiations- It is a process in which Nations meet to discuss the possibility of trade, with the goal of reaching a Trade Agreement.

The aim of both the nations is to reach mutual consciences and establish trade agreement and promote international trade

Types of Trade Agreements

1. **Unilateral trade agreements** under which an importing country offers trade incentives in order to encourage the exporting country to engage in international economic activities that will improve the exporting country's economy. E.g. Generalized System of Preferences.
2. **Bilateral Agreements** are agreements which set rules of trade between two countries, two blocs or a bloc and a country. These may be limited to certain goods and services or certain types of market entry barriers. E.g. EU-South Africa Free Trade Agreement; ASEAN–India Free Trade Area
3. **Multilateral Trade agreement** are the trade agreement between Many nations at one time
4. **Pluri-lateral trade agreement**: Agreement between more than two countries, but not many.

Regional Trade agreement/ Regional preferential trade agreement

Regional Trade Agreements (RTAs) are groupings of countries, which are formed with the objective of reducing barriers to trade between member countries.; not necessarily belonging to the same geographical region. They reduce trade barriers on a reciprocal and preferential basis for only the members of the group.

What are the types of Regional Trade Agreements (RTAs)?

Type	Description
Trading Bloc	It has a group of countries that have a free trade agreement between themselves and may apply a common external tariff to other countries Example: Arab League (AL), European Free Trade Association (EFTA)
Free-trade area	It is a group of countries that eliminate all tariff barriers on trade with each other and retains independence in determining their tariffs with nonmembers. Example: NAFTA
A customs union	It is a group of countries that eliminate all tariffs on trade among themselves but maintain a common external tariff on trade with countries outside the union (thus technically violating MFN). e.g. EC, MERCOSUR.
Common Market:	1. A Common Market deepens a customs union by providing for the free flow of *factors of production (labor and capital) in addition to the free flow of outputs*. 2. The member countries attempt to harmonize some institutional arrangements and commercial and financial laws and regulations among themselves. There are also common barriers against non-members (e.g., EU, ASEAN)
Economic and Monetary Union	Members share a common currency and macroeconomic policies. For example, the European Union countries implement and adopt a single currency.

General agreement on tariff and trade (GATT)

1. GATT is a Multilateral Trade Agreement created in January 1948 to achieve a broad, multilateral and free worldwide system of trading.
2. GATT provided the rules of international trade from 1948 to 1994 (WTO applicable from 1995 onwards)

3. GATT governed international trade, working along with the World Bank & International Monetary Fund.
4. Member countries will consult each other concerning trade problems.

The GATT lost its relevance by 1980s because

1. It was obsolete to the fast-evolving contemporary complex world trade of globalization.
2. International investments had expanded substantially.
3. Intellectual property rights and trade in services were not covered by GATT.
4. World merchandise trade increased by leaps and bounds and was beyond its scope.
5. The ambiguities in the multilateral system could be heavily exploited.
6. Efforts at liberalizing agricultural trade were not successful.

World Trade Organisation (WTO)

Introduction of WTO

1. Uruguay Round of GATT Negotiations Process culminated in the birth of WTO to meet the shortcomings of GATT.
2. The final act concluding the Uruguay Round establishing the WTO Regime was signed 15 April 1994, during the ministerial meeting at Marrakesh, Morocco, and hence is known as the Marrakesh Agreement.
3. WTO took effect on 1 July 1995. The WTO Secretariat is located at Geneva.

Major Functions/objective of WTO

1. The principal objective of the WTO is to facilitate the flow of international trade smoothly, freely, fairly and predictably.
2. To act as a forum for trade negotiations among member governments, administering trade agreements, reviewing national trade policies
3. Assisting developing countries in trade policy issues, through technical assistance and training programmes.
4. To cooperating with other international organizations.

Structure of WTO: WTO is headed by a Director General and has following structure-

MINISTERIAL CONFERENCE

1. It is the highest-Level Body, which can take decisions on all matters under any of the multilateral trade agreements.
2. It meets at-least once every two years.

GENERAL CONFERENCE:

1. It acts as the Trade Policy Review Body and the Dispute Settlement Body. It refers to the Ministerial Conference.
2. It meets several times a year.

The Goods Council, Services Council, Intellectual Property

1. These councils oversee the implementation of WTO Agreements in Goods, Services and IPRs.
2. These councils report to the General Council.

Committees and Working Groups:

1. There are many Specialized Committees working under each council (eg. 11 committees under Goods Council)
2. These committees deal with individual agreements and specific areas, eg. Membership Application, Development etc.

Guiding principles of WTO

Type	Description
Trade without discrimination	**1.** Under the WTO agreements, countries cannot normally discriminate between their trading partners **2.** Most-favored-nation (MFN) states that any advantage, favor, privilege or immunity granted by any contracting party to any product originating in or destined for any other country shall be extended immediately and unconditionally to the like product originating or destined for the territories of all other contracting parties. **3.** If a country lowers a trade barrier or opens up a market, it has to do so for the same goods or services from all other WTO members.
National Treatment Principle (NTP	1. Imported goods should be treated no less favourably than domestically produced goods (at least after Foreign Goods have entered the market). 2. This principle seeks to eliminate Non- Tariff Barriers to trade (eg. Technical standards, security standards, etc. discriminating against imported goods). 3. For instance, once imported apples reach Indian market, they cannot be discriminated against and should be treated at par in respect of marketing opportunities, product visibility or any other aspect with locally produced apples.
No Quantitative Restrictions	1. Quantitative restrictions are considered to have a greater protective effect than Tariff Measures and are likely to distort free flow of trade. 2. All types of Quantitative Restrictions by Member Countries are prohibited under WTO.
Transparency	1. WTO members are required- i) to publish their Trade Regulations, ii) to maintain institutions allowing for the review of administrative, iii) to respond to requests for information by other members, and iv) to notify changes in trade policies to the WTO. 2. These internal transparency requirements are supplemented and facilitated by periodic country- specific reports (Trade Policy reviews) through the Trade Policy review Mechanism (TPRM).
Progressive Liberalization: *(Dhire dhire se meri zindagi mai aana)*	1. Many trade issues of a controversial nature similar to labour standards, non-agricultural market access, etc. on which there was general disagreement among trading partners were left unsettled during the Uruguay Round. 2. WTO Agreements permit countries to bring in the changes gradually, through a process called Progressive Liberalization. 3. Developing countries are given a longer timeframe to conform to their obligations under WTO.
Protection of Domestic Industries	1. Trade control is permissible for protection of domestic industries, but only through Tariff Rates. 2. WTO members have to bind themselves for Maximum Tariff rates (Bound Rates) and cannot impose Tariff beyond such Bound Rates. 3. Also, Tariff rates should be generally reduced through "reciprocal and mutually advantageous" negotiations between Member countries.
Market Access:	The WTO aims to increase world trade by enhancing market access by converting all non- tariff barriers into tariffs which are subject to country specific limits. Further, in major multilateral agreements like

	the Agreement on Agriculture (AOA), to specific targets have been specified for ensuring market access
Special privileges to less developed countries	1. WTO seeks to provide greater flexibility to Less developed countries and Developing Countries, by means of special privileges. 2. LCDs and Developing countries are given longer transition period to make suitable adjustments in their domestic economies to implement WTO Agreements.
Protection of Health & Environment	The WTO's agreements support measures to protect not only the environment but also human, animal as well as plant health with the stipulation that such measures should be non- discriminatory and that members should not employ environmental protection measures as a means of disguising protectionist policies.
Dispute Settlement Mechanism	1. Disputes, Misunderstandings and conflicts should be resolved through a process of consultation and negotiations between Member Countries. 2. In case of failure of the above, the matters can be referred to the WTO Dispute Settlement Body, which seeks to resolve the same through a Panel of Experts, along with an opportunity to appeal against the ruling on legal grounds.

WTO Agreement- An Overview

Following are the Important Agreement of WTO:

Type	Description
Agreement on Technical Barriers to Trade (TBT)	Agreement on Technical Barriers to Trade (TBT) aims to • prevent standards and conformity assessment systems from becoming unnecessary trade barriers by securing their transparency and harmonization with international standards. • Also to ensure that, "Standards" are not excessively used/ misused to create unnecessary Trade Barriers.
Agreement on Trade-Related Investment Measures (TRIMs)	1. Agreement on Trade-Related Investment Measures (TRIMs) expands disciplines governing investment measures in relation to cross-border investments by stipulating that countries receiving foreign investments shall not impose investment measures such as requirements, conditions and restrictions inconsistent with the provisions of the principle of national treatment and general elimination of quantitative restrictions. 2. For example: measures such as local content requirements and trade balancing requirements should not be applied on investing corporations.
Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS)	1. Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS): This agreement stipulates most-favored-nation treatment and national treatment for intellectual properties, such as copyright, trademarks, geographical indications, industrial designs, patents, IC layout designs and undisclosed information. 2. In addition, it requires member countries to maintain high levels of intellectual property protection and to administer a system of enforcement of such rights. It also stipulates procedures for the settlement of disputes related to the agreement.
Trade Policy Review	Trade Policy Review Mechanism (TPRM) provides the procedures for the trade policy review mechanism to conduct periodical reviews of

Mechanism (TPRM)	members' trade policies and practices conducted by the Trade Policy Review Body (TPRB)
Rules of Origin (ROO)	Agreement on Rules of Origin (ROO) seeks to- ▪ Establish a "Rules of Origin" Committee, ▪ Harmonise the Rules for application to all non-preferential commercial policy instruments, Provide for dispute Settlement Procedures.
DSU	Understanding on the Rules and Procedures governing the Settlement of Disputes (DSU) aims to ▪ Provide common Rules and Procedures for settlement of Disputes on WTO Agreements, ▪ Prohibit unilateral measures which create unnecessary disputes between members, ▪ Establish Dispute Settlement Panels, Appellate Body, etc. Describe procedures, time frames, etc. for dispute settlement.

Concerns regarding WTO by Member countries

1. The developing countries contend that the real expansion of trade in the three key areas of **agriculture, textiles** and **services has been dismal.**
2. **Protectionism and lack of willingness** among developed countries **to provide market access** on a multilateral basis has driven many developing countries to seek regional alternatives.
3. Another major issue concerns **'tariff escalation'** where an importing country protects its processing or manufacturing industry by setting lower duties on imports of raw materials and components, and higher duties on finished products.
4. Developing countries complain that they **face exceptionally high tariffs** on selected products in many markets and this obstructs their vital exports. Examples are tariff peaks on textiles, clothing, and fish and fish products.
5. LDCs are hugely disadvantaged and vulnerable due to **lack of factor inputs, lack of capital, lack of infrastructure**, etc.
6. Significant issues like **Climate Change**, **high and volatile Food Prices**, and **energy production and consumption** are all issues that have not been effectively addressed.

Unit 4 – International Capital Movement

Foreign Flow of Capital

Foreign aid or assistance

- **Tied aid** with strict mandates regarding the use of money
- **Untied aid** where there are no such
- **voluntary transfer** stipulations from institutions like IMF, WB
- **Multilateral aid** from many governments who pool funds to international organizations like the World Bank

Borrowings

- **Direct inter government** loans
- **Loans from international** institutions (e.g. world bank, IMF)
- **Soft Loans** for e.g. from affiliates of World Bank such as IDA
- **External commercial borrowing**
- **Trade credit** facilities

Investments

- **Foreign direct investment (FDI)** - in industrial, commercial and similar other enterprises
- **Foreign portfolio investment (FPI)** in bonds, stocks and securities

Deposits from **non-resident Indians** (NRI)

Foreign Direct Investment (FDI)

Meaning	Foreign direct investment is defined as a process whereby the ***resident of one country*** (i.e. home country) ***acquires ownership of an asset in another country*** (i.e. the host country) and such movement of capital involves ***ownership, control as well as management*** of the asset in the host country.
Real Flow /Real investment	Direct investments are ***real investments*** in factories, assets, land, inventories etc. and involve foreign ownership of production facilities
Control	This typically occurs through acquisition of ***more than 10 percent*** of the shares of the target asset.
Components	FDI has three components- 1. Equity Capital, 2. Reinvested Earnings, 3. Other direct Capital in the form of intra-company laons between Direct Investors (Parent) and Affiliate Enterprises.
Who can be Foreign Direct Investors	1. Individuals, 2. Private and Public Enterprises, incorporated or unincorporated 3. Associated Groups of Individuals or Enterprises, 4. Governments or Government Agencies, 5. Estates, Trusts or other organizations, or 6. Any combination of the above-mentioned entities
Modes or Forms of FDI	1. ***Opening of a subsidiary or associate*** company in a foreign country, 2. ***Equity injection*** into an overseas company, 3. ***Acquiring a controlling interest*** in an existing foreign company, 4. ***Mergers and acquisitions***(M&A) 5. ***Joint venture*** with a foreign company. 6. ***Green field investment*** (establishment of a new overseas affiliate for freshly starting production by a parent company).

Types of FDI

Horizontal FDI

1. when the investor establishes the same type of business operation in a foreign country as it operates in its home country.
2. For example, a cell phone service provider based in the United States moving to India to provide the same service.

Vertical FDI

1. A vertical investment is one under which the investor establishes or acquires a business activity in a foreign country which is different from the investor's main business activity yet in some way supplements its major activity.
2. For example; an automobile manufacturing company may acquire an interest in a foreign company that supplies parts

Conglomerate FDI

1. A conglomerate type of foreign direct investment is one where an investor makes a foreign investment in a business that is unrelated to its existing business in its home country
2. For example; an automobile manufacturing company may acquire an interest in a foreign company that make furniture.

Foreign Portfolio Investment (FPI)

Meaning	Foreign portfolio investment is the flow of **'financial capital'** rather than **'real capital'** and does not involve ownership, control, or management on the part of the investor.
Concept	FPI is a process in which the Resident of One Country (i.e Home Country) acquires ownership of **Financial Assets / Securities** in another country (i.e Host Company)
Example	European Citizen buying Bonds of Indian company in Indian Market
Charact-eristics of FPI	1. The singular intention of a foreign portfolio investor is to **earn a remunerative return through investment in foreign securities** and is primarily concerned about the safety of their capital, the likelihood of appreciation in its value, and the return generated. 2. Such investors also **do not have any intention of exercising voting power or controlling or managing the affairs of the company** in whose securities they invest 3. **lower stake** in companies with their total stake in a firm at below 10 percent. 4. FPI have **immediate impact on balance of payment** or exchange rate rather than on production or income generation.

FDI Vs FPI

Investment Type	Investment involves creation of **physical /real** assets	Investment is only in **financial/ Nominal** assets
Term	Has a **long-term interest** and therefore remain invested for long	Only **short-term interest** and generally remain invested for short periods
Difficulty in capital withdrawal	Relatively **difficult** to withdraw	Relatively **easy** to withdraw
Nature	**Not** inclined to be **speculative**	**Speculative** in nature
Technology	Often accompanied by **technology transfer**	**Not** accompanied by **technology transfer**
Impact on employment	**Direct impact** on employment of labour and wages	**No direct impact** on employment of labour and wages
Voting %	=>10%	<10%
Control & Mgmt.	FDI takes place for **lasting interest and control.**	No interest in Management or Control.
Influence	**Significant** degree of influence by the Investor on the management of the acquired Enterprise.	Purely Financial Investment. **No** significant degree of **influence** on the Entity's management.

Reasons/factor for FDI and FPI

1. **Interdependency-**the increasing interdependence of national economies and the consequent trade relations and international industrial cooperation established among them
2. **Economies of scale-** desire to reap economies of large-scale operation arising from technological growth

3. **Desire to control**-desire to procure a promising foreign firm to avoid future competition and the possible loss of export markets
4. **Risk diversification** so that recessions or downturns may be experienced with reduced severity
5. **Desire to control IPR-** necessity to retain complete control over its trade patents and to ensure consistent quality and service or for creating monopolies in a global context
6. **Penetration into the markets** of those countries that have established import restrictions such as blanket bans, high customs duties or non-tariff barriers which make it difficult for the foreign firm to sell in the host-country market by *'getting behind the tariff wall'.*
7. **Strategy to obtain control of strategic raw material** or resource so as to ensure their uninterrupted supply at the lowest possible price; usually a form of vertical integration
8. **Labour cost advantage-** the existence of low relative wages in the host country because of relative labour abundance coupled with shortage and high cost of labour in capital exporting countries, especially when the production process is labour intensive.
9. **Tax differentials** and tax policies of the host country which support direct investment.

Factors discouraging FDI in host Country

General	Macro-Economic Factors	Labour related	Law/ Governance related
⇨ Political instability ⇨ Poor infrastructure ⇨ Small size of market with lack of growth potential. ⇨ Poor track-record of investments	⇨ High rates of inflation ⇨ Exchange rate volatility ⇨ Low income levels and lower demand	⇨ Poor literacy and low labour skills, ⇨ Dominance of labour unions ⇨ Language barriers	⇨ Higher degree of Non – Tariff barriers ⇨ Unfavorable tax regime ⇨ Law not favorable to IPR protection ⇨ Double taxation

FDI in Host Country- Advantages and Dis-advantages

1. ***Labour-*** Benefits of higher wages, better opportunities for employment and skill enhancement, increased productivity
2. ***Technology-*** FDI can accelerate growth and foster economic development by providing the much-needed capital, technological know-how, management skills and marketing methods and critical human capital skills in the form of managers and technicians.
3. ***Domestic Industry-*** Competitive Environment due to entry of Foreign Firms. Cost reducing and quality improving innovations.
4. ***Global Market-*** Foreign enterprises possessing marketing information with their global network of marketing promote the exports of developing countries.
5. ***Domestic resources-*** The resources will be utilised in most efficient manner such that they give maximum output. This happens because of use of advanced use to technology

6. ***Consumer*** **-** It is likely that foreign investments enter into industries in which scale economies can be realized so that consumer prices might be lowered which was not possible for domestic firms with available resources.
7. ***There are other advantages such as-*** Employment opportunity, Monopoly control, Competition.

FDI in Host Country- Dis-advantages

1. ***Labour*** **-** FDIs are likely to concentrate on capital-intensive methods of production and service so that they need to hire only relatively few workers. Such technology is inappropriate for a labour-abundant country as it does not support generation of jobs
2. ***Monopoly-*** Foreign firms may also act as monopolists by exercising the power of deep pocket and wider coverage
3. ***Domestic resources*** **-** FDI is also held responsible by many for ruthless exploitation of natural resources and the possible environmental damage.
4. ***Technology*** - Often criticized of transferring outdated technology.
5. ***Domestic Industry*** - Decreasing competitiveness, detrimental to the long term interests.
6. ***Employment*** - If FDIs are concentrated towards capital-intensive methods, they will need only few workers. Such technology is inappropriate for labour-abundant country with high level of unemployment
7. ***There are other disadvantages such as***- domestic industry suffering, widening inequality, rise in interest rate due to increased demand, unfavourable BOP and Monopoly power.

FDI in India

Point	Description
Background	After the liberalization of the economy, India has been one of the highest Recipient Countries for FDI globally and is one of the top-ten most preferred investment destinations of the world.
Initiatives	Various Initiatives of the Government consistently over a period of years have led to growth of FDI in India. Some of these initiatives include- 1. Shifting of large number of items from import licensing to Open General Licensing (OGL), 2. Tariff reduction, 3. Automatic approval of FDI, 4. Simplification of procedures, 5. Signing of the Multilateral Investment Guarantee Agency Protocol for protection of Foreign 6. Permitting use of Foreign Trade Marks and Brand Names, 7. Permitting 100% FDI in a variety of sectors, and increasing sectoral caps in various sectors, 8. Legal reforms including Foreign exchange Management Act (FEMA), SEZ Act,etc.
Routes for FDI	An Indian Company can obtain FDI through- 1. **Automatic Route-** i.e without any prior approval of the Government or RBI. 2. **Approval Route**- i.e with prior approval of the Government
Instruments	FDI can be obtained through issue of "FDI – Compliant instruments" viz Equity Shares, fully and mandatorily Convertible Preference Shares and

	Debentures, Partly Paid Equity Shares and Warrants, issued in accordance with the Companies Act 2013 and SEBI Guidelines, as applicable.
Repatriation	1. All FDIs are repatriable (net of taxes) except- a) where the investment is made or held on non- repatriation basis, or b) where the sectoral condition specifically mentions non-repatriation. 2. Dividends/ profits (net of taxes) on FDIs being Current Income can be remitted outside India through an Authorized Dealer Bank. 3. Only NRIs are allowed to set up Partnerships/ proprietorships in India on non- repatriation basis.
Prohibition	In India, Foreign Investment is prohibited in the following sectors- 1. Lottery Business including Government/ private Lottery, Online Lotteries etc 2. Gambling and Betting including Casinos etc 3. Chit Funds 4. Nidhi Company 5. Trading in Transferable Development Rights (TDRs) 6. Real Estate Business or Construction of Farm Houses 7. Manufacturing of cigars, Cheroots, Cigarillos and Cigarettes, of Tobacco or of Tobacco substitutes 8. Activities / sectors not open to Private Sector Investment eg. Atomic Energy and Railway Operations (other than permitted activities) Note: foreign Technology Collaboration in any form including licensing for franchise, trademark, brand name, management contract is also prohibited for Lottery Business and Gambling and Betting Activities.
Overseas Direct Investment by Indian Business	1. There has been progressive relaxation of the capital controls and simplification of procedures for outbound investments from India. 2. As a result, Outbound Foreign Direct Investments (OFDIs) from India have undergone substantial increase in terms of size, geographical spread and sectorial composition. 3. At present any Indian Investor can make OFDI in any bonafide activity except in certain Real Estate activities.

Currency	Currency is the **legal tender** of any country within its national Frontier. When we buy or sell goods, we take currency in exchange Major traded currencies in the world are- Dollar, Yen, Pound and Euro
Home Currency	A **country's own currency** is known as home currency / domestic currency.
Foreign Currency	For any country, any currency **other than home currency** is a foreign currency.
Vehicle Currency	a) A currency that is **widely used to denominate international contracts** made by parties even when it is not the national *currency* of either of the parties b) a currency that is traded internationally and, therefore, is in high demand c) a type of currency used in euro area for synchronization of exchange rates d) Example – Dollar/ USD
Foreign Exchange	The term 'Foreign Exchange' refers to money denominated in a currency other than the domestic currency. Exchange rate is the rate at which the currency of one country exchanges for the currency of another country.

Unit 5 – EXCHANGE RATE AND ITS ECONOMIC EFFECTS

Foreign exchange Market	The wide-reaching collection of markets and institutions **that handle the exchange of foreign currencies** is known as the foreign exchange market. Foreign exchange market comprises of buyers and sellers of foreign currency. The operations in the Foreign exchange market originate in the requirements of customers for making remittances to and receiving them from other countries.
Different types of transaction in Foreign exchange market	• Transaction between- Bank and Customer • Transaction between- Bank and another bank in same center • Transaction between- Bank in one country and overseas branch • Transaction between- Central bank of two countries
Features of Foreign exchange Market	The features of foreign exchange markets are- 1. It is ***a wide-reaching market*** and operates ***worldwide.*** 2. It is ***largest market in the world*** in terms of cash value traded. 3. It is an ***Over-the-Counter market*** and not a physical place as such. (OTC) 4. There is ***no central trading location*** and ***no set hours*** of trading. 5. Market participants who demand and supply currencies represent themselves through their Banks and Key Forex Dealers who respond to market signals transmitted instantly across the world.

	6. Forex Market operates on ***very narrow spreads*** between buying & selling prices.
Major Participants in Forex market and their role	1. **Central banks-** To stabilize the excessive volatility in exchange rate (Either appreciation or depreciation) and maintain stability in exchange rate in keeping with the requirements of national economy 2. **Commercial banks -** To Transact on account of Client. To trade on their own account, banks may operate either as speculators or arbitrageurs/or both. 3. **Governments -** To purchase or sell forex with the same aims as that of the Central Banks as above 4. **Foreign exchange Dealers-** Intermediaries between different dealers or banks. 5. **Arbitrageurs-** To earn profit by discovering price differences between pairs of currencies with different dealers or banks 6. **Speculators /Bulls or bears -** are deliberate risk-takers who participate in the market to make gains which result from unanticipated changes in exchange rates. 7. **MNCs that engage in international trade and investments -**For normal trade
Spot Exchange rate	A spot exchange rate is the rate at which the currencies are being traded ***for delivery on the same day.*** Example: If you have to make payment for the cargo arrived today in foreign currency and you visit bank. The rate at which you buy foreign currency today to make payment is called as spot rate.
Future Exchange rate	1. Contracts to buy or sell currencies for ***future delivery*** which are carried out in forward and/or futures markets. 2. The currency forward contracts are quoted just like spot rate; however, the actual delivery of currencies takes place at the specified time in future. 3. The forward exchange rate is set and agreed by the parties and remains fixed for the contract period regardless of the fluctuations in the spot rates in future. The actual spot rate on that day may be lower or higher than the forward rate agreed today. 4. The elements which get fixed on the date are- **rate of exchange, Amount and Date of execution.** **Example:** E.g.- Suppose you Import Mobile today on 1.1.18 from China with amount involved 10 million Dollar. Credit period allowed by the supplier is 3 month and Spot rate today is 67. You are worried about your net outflow after 3 months as the rate may rise or fall. You Visits bank to hedge your position and fix the rate for Rs. Dollar exchange after 3 month-68.5. Now the outflow, amount and date are fixed by you. ∂ What is the spot rate? ∂ What is Rs. Outflow to settle contract? ∂ What will be date of execution?
Forward Premium and	**A forward premium** is said to occur when the forward exchange rate is more than a spot trade rate. E.g.- Spot rate Rs/Dollar = 63 and future rate 67

Forward Discount

Forward discount is where the trade is quoted at a lower rate than the spot trade.
E.g.- Spot rate Rs/Dollar = 63 and future rate 61

Example

The following spot rates are observed in the foreign currency market.

Currency	Foreign Currency per US $
Britain Pound	00.62
Netherlands Guilder	01.90
Sweden Kroner	06.40
Switzerland franc	01.50
Italy Lira	1,300
Japan yen	140

On the basis of this information compute to the nearest second decimal the number of-

Sr.	Particulars	Calculations	Answer
1	British pounds that con be acquired for $ 100		
2	Swedish Kroner that can be acquired for $ 40		
3	$ that 50 Dutch guilders will buy		
4	Dollars that 200 Swiss Francs can buy		
5	Italian Lira that can be acquired for $ 10		
6	Dollars that 1000 Japanese yen will buy		

Bid rate/ Buying rate

It is the rate at which the **dealer is ready to buy the foreign currency** in exchange for domestic currency. Therefore, it is the buying rate.

Ask rate/ Selling rate

It is the rate at which the foreign dealer 'asks' its customers to pay in local currency in exchange of the foreign currency. Therefore, it is the **selling rate or offer rate** at which foreign currency can be purchase from the dealer.

Bid rate/Buying rate and Ask rate/selling rate is considered from banker's point

Spread or Bid-Ask Spread

The **difference between bid price and the offer price** is called spread. The offer price is always greater than the bid price as the dealers make money by buying bid price and selling at offer price.

Example: A dealer quotes Indian rupees as Rs. 46.90-48.60 vis-vis dollar. The bid price is Rs. 46.90, the offer price is Rs. 48.70 and the spread is Rs. 1.7 (i.e. 48.60-46.90)

Cross rate

There may be two pairs of currencies with one currency being common between the two pairs and is called 'cross rate'

Example: Suppose, an Indian importer wishes to purchase Yen then he would have to buy dollars first and then sell dollars to buy Yen. The banker would obtain Yen/$ rate from Tokyo or Singapore Market and

	then apply the Rs. / $ rate obtained from the local Indian market to arrive at exact rupees to be given for purchase of Yen. $\frac{A}{B} = \frac{A}{C} * \frac{C}{B}$ Bid (A/B) = Bid (A/C) x Bid (C/B) Ask (A/B) = Ask (A/C) x Ask (C/B) Question 1) Rs/ Dollar rate is 79 and Rs/ Pound rate is 49 what is Dollar/ Pound rate Question 2) Suppose the exchange rate between US dollars and the French franc was FF 5.9 = $1 and the exchange rate between francs and pound?
Base currency and Counter currency	In an expression Currency of one country/ Currency of Another country, the currency in denominator is Base currency and that in numerator is Counter currency ∂ **Therefor in Direct Quote FC is base currency and HC is counter currency.** ∂ **Therefor in Indirect Quote HC is base currency and FC is counter currency**

Difference between Direct and Indirect Quote

Point	Direct Quote	Indirect Quote
Meaning	A Direct Quote is the number of units of a Local Currency exchangeable for **one unit of a Foreign Currency.**	An Indirect Quote is the number of units of a Foreign Currency exchangeable for **one unit of local Currency.**
Also known as	European Currency Quotation	American Currency Quotation
Base Currency	Foreign Currency (i.e. Rupee in the above case)	Local Currency (i.e. US $ in the above case)
Counter Currency	Local Currency (i.e. US $ in the above case)	Foreign Currency (i.e. Rupee in the above case)
Relationship	Direct quote= 1/Indirect Quote	Indirect quote= 1/ Direct Quote
Example	Rs. 67/ US $ means 67 is required to buy 1	$ 0.0143 per Rupee means 1 is obtained by selling $ 0.0143

Identify the Direct and indirect quote w.r.t Rs. give- also provide the direct quote for each indirect quote and indirect quote for each direct quote

Currency	Rate	Quote	Type of quote	Calculation	Indirect quote
Yen	0.64	Yen/Rs.			
Australian Dollar	0..319	AUD/Rs.			
UAE Dirham	18.17	Rs./Dirham			
Riyal	119	Rs./ Riyal			
Euro	0.0191	Euro/Rs.			

Part B

Determination of Exchange rate

Exchange rate is determined by ***equilibrium of Demand and Supply***. RBI intervenes the market only to stabilize the exchange rate and prevent wide fluctuations.

Demand for Foreign currency arises due to	Supply of Foreign currency arises due to
∂ ***Purchase of goods and services*** from another country- Import ∂ ***Unilateral transfers*** such as gifts, awards, grants, donations or endowments ∂ ***Make investment*** income payments abroad ∂ ***Purchase financial assets***, stocks or bonds abroad ∂ Open a ***foreign bank account*** and ∂ Acquire ***direct ownership*** of real capital	∂ ***Sale of goods and services*** from another country- Export ∂ Unilateral transfers **Inward** such as gifts, awards, grants, donations or endowments ∂ ***Receive investment income*** payments abroad ∂ ***Sale financial assets***, stocks or bonds abroad ∂ ***Sale direct ownership*** of real capital

State whether there will be rise in exchange rate or fall in exchange rate

1. Original Demand curve denoted by D And Original Supply curve denoted by S
2. New Demand curve D1 shifts upward And Original Supply curve remains constant
3. New Demand curve D1 shifts downward And Original Supply curve remains constant
4. Original Demand curve denoted by D And Supply curve shifts rightward
5. Original Demand curve denoted by D And Supply curve shifts leftward
6. Both DD and SS curve moves in same direction and same proportion.

Rise in situation-
Fall in situation-

Difference between HC appreciation and HC depreciation

	Home Currency Depreciation (or Foreign currency appreciation)	Home Currency Appreciation (or Foreign Currency Depreciation)
Meaning	Currency depreciates when its value falls with respect to the value of another currency or a basket of other currencies. It means that one is able to get more of rupees (here Re. 1 more) of same value of dollar (i.e. $ 1) after appreciation.	Currency appreciates when its value increases with respect to the value of another currency or a basket of other currencies. It means that one is able to get less of Rupees (here Re.1 less) for same value of dollar (i.e. $1) after depreciation. Here dollar has depreciated.
Effect	The home currency becomes relatively less valuable.	The Home currency becomes relatively more valuable.
Example	Suppose 72/ US $ becomes 75/ US $. This is called Depreciation of INR,	Suppose 72/ US $ becomes 69/ US $. This is called Appreciation of

	and Appreciation of the US Dollar.	INR, and Depreciation of the US Dollar.
Cause	1. This arises when the Demand Curve for Foreign Currency shifts to the right representing increased demand for Foreign Currency, and Supply Curve remains unchanged. 2. Where the DD curve remains same but the supply decreases	1. This arises when the Supply Curve for Foreign Currency shifts to the right representing increased supply for Foreign Currency, and Demand Curve remains unchanged. 2. Where the DD curve remains same but the supply increases

Impact on Exporters and importers by Appreciation/ depreciation of currency

Situation	Type	Impact	Good or Bad
When Foreign currency appreciates	Exporter		
When Home currency appreciates	Exporter		
When Home currency depreciates	Importer		
When Foreign currency Depreciates	Importer		

Devaluation Vs Depreciation

	Devaluation	Depreciation
Meaning	**Deliberate downward** adjustment in the value of a country's currency relative to another currency, group of currencies or standard.	Currency depreciates when its value falls with respect to the value of another currency or a basket of other currencies.
causes	Devaluation is caused by action of the Government/ central Bank/ Monetary authority/	Depreciation is caused when Demand increases with supply remaining constant or Where Demand is constant and Supply decreases
Regime	Applicable if **Fixed exchange rate Regime**	Applicable if **Floating exchange rate Regime**
Determinant	It is a monetary policy tool used by countries that have a fixed exchange rate or nearly fixed exchange rate regime	Determined by Market forces. Demand and supply forces determines the value of currency

Revaluation is the opposite of devaluation and the term refers to a discrete raising of the otherwise fixed par value of a nation's currency.

Impacts of exchange rate fluctuations on domestic economy

Explain the Impact of *Home currency Depreciation and Home currency Appreciation* on Each Components

1. **Export:**

Home Currency Depreciates- Depreciation in value of home currency lowers the relative price of country's export. Foreigner find that the country's exports are cheaper and Thus **Export Demand Increases.**

E.g. Suppose the rate of Rs./$ is quoted at 65 and The SP in India Rs. Is 650.

Therefore, the Exporter will Invoice the Goods at 10$. Suppose the rate of exchange become 70/$ on account of Rs. Depreciation. Now the Invoice will be made at 650/70 = 9.28 $. Now the foreigner will find the product more attractive because of lower cost

Home Currency Appreciates- Appreciation in value of Home currency increases the relative price of Exports. Foreigner lands out paying more for the goods and Thus **Export Demand decreases**

E.g. Suppose the rate of Rs./$ is quoted at 65 and The SP in India Rs. Is 650. Therefore, the Exporter will Invoice the Goods at 10$. Suppose the rate of exchange become 60/$ on account of Rs. Appreciation. Now the Invoice will be made at 650/60 = 10.83 $. Now the foreigner will find the product Costlier and Export will be Hampered.

2. **Imports:**

Home Currency Depreciates- Domestic residents and Importers have to pay more Home Currency on importing products. Demand for **Imports decreases.**

Suppose Import is made today for 10000 units of commodity at 60Rs/$. Rate of Rs/$ rises on account of HC depreciation and Goes to 65Rs/$. The importer lands up paying more, and this discourages Import.

Home Currency Appreciates- Domestic consumers pay less for foreign products. The demand for Imports increases.

Suppose Import is made today for 10000 units of commodity at 60Rs/$. Rate of Rs/$ falls on account of HC Appreciation and falls to 55Rs/$. The importer lands up paying less, and this encourages Import

3. **Domestic Inflation: (relate with Import0**

Home Currency Depreciates- If Imports occupies significant portion of country's domestic consumption, Depreciation in value of HC will lead to Cost push Inflation. This is because the price of the commodity in which Imported goods are used will rise and this overall inflation will rise.

Home Currency Appreciates- If Imports occupies significant portion of country's domestic consumption, Appreciation in value of HC will bring down Inflation. This is because the price of the commodity in which Imported goods are used will fall.

4. **Domestic Demand:**

Home Currency Depreciates- Depreciation in value of HC makes the Import costlier and thus push the demand for Domestic goods. This also makes the exported goods cheaper for foreigners (refer point 1-exports). Together leads to expansion of economic output.

E*xample: Suppose you purchase goods worth 1000$ from USA and due to currency depreciation INR rate falls from 65 to 70 per dollar and You end up paying more. This will discourage you to buy foreign products and lead to Increase in DD of Domestic product. Also, as explained in point 1- Exports demand for domestic goods in Foreign market will rise.*

Home Currency Appreciates- Appreciation in value of HC makes the Import cheaper and thus reduces the demand for Domestic goods. This also makes the exported goods costlier for foreigners (refer point 1-exports). Together leads to contraction of economic output.

E*xample: Suppose you purchase goods worth 1000$ from USA and due to currency Appreciation INR rate rises from 65 to 60 per dollar and You end up paying less. This will encourage you to buy foreign products and lead to decrease in DD of Domestic*

product. Also, as explained in point 1- Exports demand for domestic goods in Foreign market will fall.

5. **Factor Mobility:**

Home Currency Depreciates- Production for exports and of import substitutes becomes more profitable. So, factors of Production will be induced to move into the tradable goods sectors and out of the non-tradable goods sectors.
Home Currency Appreciates- Factors of Production will be induced to move into the non – tradable goods sector and out of the tradable goods sectors. This is due to reduction in demand for Exports and imports becoming cheaper.

Tradable Goods are those which can be traded in International Market-
Non-Tradable goods are those which cannot be traded in International Market- land, electricity, Water supply, House and Building, etc.

6. **Wages:**

Home Currency Depreciates- Depreciation in value of HC will make Export products relatively cheaper for foreigners and thus Export oriented labour sector's wages will rise on account of increased demand and increased production
Home Currency Appreciates- Appreciation in value of HC will make Export products relatively Costlier for foreigners and thus Export oriented labour sector's wages will fall on account of decreased demand and decreased production. Also, unemployment in an economy will rise

7. **Trade Balance**

Home Currency Depreciates- Depreciation will make the exported goods cheaper for Foreigners and increases the global competitiveness of Domestic Firms, increases the volume of exports and promotes trade balance. (Refer Note 4). Thus, it is a favorable factor.
Home Currency Appreciates- Appreciation increases Export prices, Currency appreciation leads to reduction in volume of exports and distorts the trade balance.

8. **Foreign currency Debt**

Home Currency Depreciates- Depreciation in value of home currency will lead to more HC outflow towards repayment of loan and Principle. Business firms and Government will have to pay higher effective interest rate on borrowings.
E.g. Suppose you took FC loan of 10,000 $ at an interest rate of 10%. The spot rate is 60 and Principle along with interest is to be paid after 3 Months. After 3 months, rate happened to be 67. The payout in that case will be 11,000 x 67 = 737,000. Therefore, effective rate of borrowings becomes 22.83%
Home Currency Appreciates- Appreciation in value of home currency will lead to lesser HC outflow towards repayment of loan and Principle. Business firms and Government will have to pay effectively lower interest rate on borrowings.
E.g. Suppose you took FC loan of 10,000 $ at an interest rate of 10%. The spot rate is 60 and Principle along with interest is to be paid after 3 Months. After 3 months, rate happened to be 57. The payout in that case will be 11,000 x 57 = 627,000. Therefore, effective rate of borrowings becomes 4.5%

9. **Profit of business firm**

Home Currency Depreciates- Exported oriented units will make higher profits due to both, increased demand and higher inward remittance
Home Currency Appreciates- Exported oriented units will get lower domestic currency per unit of Foreign currency.

Note: reverse will happen in case of importers

10. **Inward remittance**

Home Currency Depreciates- Remittances to homeland by Non- Residents and Businesses abroad fetches more in terms of Domestic Currency. Depreciation increases such inflows. E.g. Suppose your Cousin saved 10,000$ for you and the rate of exchange today is 60. He agreed to remit you the money after 3 months as he is aware that the currency rate will fluctuate and Rs. Will depreciate. After 3 Months the rate happened to be 67 and now upon remittance you receive 6,70,000 Rs. **Home Currency Appreciates-** Such remittances to homeland by Non-Residents and businesses abroad is less in amount in terms of Domestic Currency. E.g. Suppose your Cousin saved 10,000$ for you and the rate of exchange today is 60. He agreed to remit you the money after 3 months. After 3 Months the rate happened to be 56 and now upon remittance you receive 5,60,000 Rs.
11. Current account **Home Currency Depreciates-** If Export earnings rise faster than the Import Spending, then Current Account will improve. However, the impact will not be substantial if export volumes do not increase to a reasonable level **Home Currency Appreciates-** Increasing imports and declining Exports cause larger deficits and worsen the Current Account balance. However, inelastic demand for and exports may sometimes lead to an improvement in the Current Account position

Arbitrage

Meaning	1. Arbitrage refers to the practice of making **risk-less profits** by intelligently exploiting price differences of an asset at different dealing places. 2. When **price differences occur in different markets**, Market Participants will purchase Asset in a low – priced market, for re-sale in a high- priced market and make profit in this process
Outcome	**Outcome of Arbitrage:** On account of arbitrage, regardless of physical location, at any given moment, all markets tend to have the same exchange rate for a given currency.
Process	1. The Arbitrageur find the market where the asset (Currency) is traded at lower rate and another marker where the currency is traded at higher rate. 2. He will buy from the market where the currency is quoted at the lesser value and sell it in the market where the price is high. 3. Thus, he makes riskless profit by this process.
Example	At two forex centers, the following Rs – US $ rates are quoted: o London: Rs. 47.5730 – 47.6100 o Tokyo: Rs. 47.6350 – 47.6675 o Find out arbitrage possibilities for an arbitrageur who has Rs. 100 million.
How long it will continue	• Continues buying from the market, where the rate is lower, will create more demand and thus price there will rise. Similarly, excessive selling on another counter will lead to fall in price. • This activity will **continue until the prices in the two markets are equalized**, or until they differ only by the amount of transaction cost

	involved in the operation. • There is potential for arbitrage in forex market if exchange rates are not consistent between currencies. However, since forex markets are highly integrated and efficient, any profit spread on a given currency is quickly arbitraged away.

Exchange rate Regime

1. An exchange rate regime is the system by which a **country manages its currency in respect to foreign currencies**.
2. It refers to the method by which the **value of the domestic currency in terms of foreign currencies is determined.**

There are two major types of exchange rate regimes at the extreme ends; namely

(i) floating exchange rate regime (also called a flexible exchange rate), and

(ii) fixed exchange rate regime

Floating rate Regime

Point	Description
Concept	1. Under ***floating exchange rate regime***, the equilibrium value of the exchange rate of a country's currency is determined by ***demand for and supply of currency*** relative to other currencies. 2. There is ***no predetermined target rate*** and the exchange rates are likely to change at every moment 3. There is ***no interference on the part of the government or*** the ***central bank*** of the country in the determination of exchange rate, except to moderate the rate of change and preventing undue fluctuations.
Merits	1. Allows Central bank and /or government to pursue its ***own independent monetary policy*** 2. Floating exchange rate regime allows exchange rate to be used as a ***policy tool***: for example, policy-makers can adjust the nominal exchange rate to influence the competitiveness of the tradeable goods sector 3. The central bank is ***not required to maintain a huge foreign exchange reserve.***
Demerits	1. volatile exchange rates generate a ***lot of uncertainties*** in relation to international transactions. 2. It ***adds risk premium*** to the costs of goods and assets traded across borders.

Fixed rate Regime

Point	Description
Concept	a) The Country's ***Central bank and / or Government announces or decrees the Rate***, i.e. what its currency will be worth in terms of – i) either other country's currency, ii) a basket of currencies, iii) another measure of value, e.g. Gold. b) When a Government intervenes in the Forex Market so that the Exchange Rate of its currency is different from what would have been determined by the free flow of market forces, it is said to have

	established a ***"peg"*** for its currency. c) To maintain the Rate at that announced level (called "Parity Value"), the ***Central Bank and/or Government also regularly operates in the market*** by buying (or selling) Foreign Reserves.
Merits	a) ***Ensures stability*** and increase in Foreign Trade and Capital movements. b) ***Avoids Currency fluctuations*** and eliminates Exchange Rate Risks. c) Imposes ***discipline on a Country's Central Bank and/or Govt.***, and thereby generates lower levels of inflation. d) ***Enhances the credibility*** of the Country's Monetary Policy.
Demerits	a) The Central Bank and/or Government has to ***maintain large reserves*** of Foreign Currencies, to maintain the Exchange rate at the level fixed by it. b) Market Forces of ***Demand and Supply have no role*** in determination of Equilibrium FX Rate.

DIFFERENCE BETWEEN FLOATING VS FIXED EXCHANGE RATE REGIMES:

Point	Floating Exchange rate Regime	Fixed Exchange Rate Regime
Determinant of Rate	Market Forces of ***Demand for and Supply of Currency***.	As ***announced or decreed*** by the Country's Central Bank and/ or Government.
Target Rate	There ***is no pre-determined Target*** Rate.	***As announced*** by Central Bank / Government.
Role of Govt. and/or Central Bank	***Only for moderating*** the Rate and preventing undue fluctuations in the Rate. No interference in setting / establishing a Rate level.	***For determination*** of the rate , and also for ensuring that the rate is maintained.
Stability in Rate	***Rate keeps on changing*** based on market factors.	***Rate generally remains stable*** and only a small variation is possible.

INTERMEDIATE EXCHANGE RATE REGIMES

According to the International Monetary Fund (IMF), Exchange Rate Regimes may be classified as under-

Hard Peg	The Central Bank sets a fixed and unchanging value for the Exchange Rate.
Soft Peg	The Exchange Rate is generally market determined, but if the Rates tend to be move speedily in one direction, the Central Bank will intervene in the market.
Floating Regime	Market determines the Exchange rate. Supply and Demand of Currency determines the rate of exchange
Others/ Residual	Other managed arrangement

IMF CLASSIFICATIONS OF EXCHANGE RATE REGIMES

Exchange rate Regime	Description
Exchange Arrangements with no separate Legal Tender **(Note: This is also**	Currency of another country circulates as Sole Legal Tender or Member belongs to a Monetary or Currency Union in which same Legal Tender is shared by Members of the Union. (e.g.US Dollar is used in Ecuador, Zimbabwe)

called "Dollarization".)	
Other Conventional Fixed Peg Arrangement (e.g. Chinese Yuan)	Country Pegs its currency (formal or de facto) at a fixed rate to a major currency or a basket of currencies, where exchange Rate fluctuates within a narrow margin or at most = 1% around central rate.
Pegged Exchange Rates within horizontal Bands	Value of the Currency is maintained within margins of fluctuations around a formal or de facto fixed peg that are wider than ± 1% around Central Rate.
Crawling Peg	Currency is adjusted periodically in small amounts at a fixed, pre-announced rate in response to changes in certain quantitative indicators.
Crawling Bands	Currency is maintained within certain fluctuation margins say (± 1 – 2 %) around a Central rate that is adjusted periodically based on economic indicators.
Managed Floating (e.g. Indian Rupee)	Monetary Authority influences the movements of the Rate through active intervention in Forex Markets without specifying a pre-announced path for the rate.
Free Floating (e.g. US Dollar, Japanese Yen, New Zealand Dollar)	Exchange Rate is market- determined. Intervention by Monetary Authority is aimed at moderating rate of change and preventing undue fluctuations in the exchange rate, rather than at establishing a level for it.

Real rate and Nominal rate of Exchange

Nominal exchange rate means how much of one currency (i.e. money) can be traded for a unit of another currency when prices are constant. If the nominal exchange rate between the dollar and the Indian Rupee is 65, then one dollar will purchase 65 INR.

By contrast, the 'real exchange rate' describes 'how many' of a good or service in one country can be traded for 'one' of that good or service in a foreign country. It is denoted by R

The real exchange rate is represented by the following equation:

Real exchange rate (R) = (nominal exchange rate x Foreign price) / (domestic price).

Let's say that we want to determine the real exchange rate for Mobile between the US and India. Nominal exchange rate between these countries is INR 60 per dollar. Price of Laptop in India is INR 28,000 and the price of Laptop in the US is $700. In this case, we begin with the equation for the real exchange rate of real exchange rate = (nominal exchange rate x foreign price) /(domestic price). Substituting in the numbers from above gives real exchange rate = (60 x $700) / 28,000 INR = 1.5 Laptops in India per American Laptop.

Implication of RER

- The real rate tells us how many times more or less goods and services can be purchased abroad (after conversion into a foreign currency) than in the domestic market for a given amount.
- In contrast to the nominal exchange rate, the real exchange rate is always "floating", since even in the regime of a fixed nominal exchange rate E, the real exchange rate R can move via price-level changes.

- Rather than focusing on the nominal exchange rate, it is more sensible to monitor the real exchange rate when assessing the effect of exchange rates on international trade or export competitiveness of a country.

Nominal Effective Exchange rate (NEER)

- Unlike nominal and real exchange rates, NEER and REER are not determined for each foreign currency separately. Rather, each is single number (usually expressed as an index) that expresses what is happening to the value of the domestic currency against a whole basket of currencies. These other currencies are picked on the basis of that country's trade with the domestic economy. India trades with a large number of countries such as US, EU, Japan and Middle East. With each individual currency, the rupee has a different exchange value.
- To calculate NEER, we weight the nominal exchange rate of the rupee against the currencies of these trading partners by their share in India's trade. Then, by summing the weighted exchange rates, we get the NEER.
- The NEER does not reflect the price changes in the observed country relatively to price changes in the trading partners.

Real effective exchange rate (REER):

A real effective exchange rate (REER) adjusts NEER by the appropriate foreign price level and deflates by the home country price level. The REER is NEER with price or labor cost inflation removed from it.

Unit 1 – Basics and Flow of income

Question 1: Why there is need of National Income determination?
Answer: Just as accounting conventions to measure performance of business, there are conventions for measuring and analysing economic performance of business.

Question 2: Define national income
Answer: The net value of all economic goods and services produced within the domestic territory of a country in an accounting year plus the net factor income from abroad. It is the sum total of factor incomes generated by the normal residents of a country in the form of wages, rent , interest and profit in an accounting year'.

Question 3: What do you mean by stock variable? Give example
Answer: The variable which is expressed over a period of time. For example, stock of finished goods on 31st March 2018.

Question 4: What do you mean by flow variable? Give example. Whether National Income is flow variable or Stock Variable
Answer: National income is a flow concept because it is measured over a period of time. It express the flow of money value of goods and services over a period of time. Example sales for the year ended 31 March 2018. National income is flow variable.

Question 5: Why National income includes only Final goods and service and does not includes intermediate goods?
Answer: As the Final goods already includes the value of intermediate goods and the inclusion of intermediate goods will lead to double counting, the same is excluded from calculation of National income. It includes Rent received for land, Wages for labour, Interest for capital and Profit for enterprise.

Question 6: what are the two categories of Final goods?
Answer: The final products are of two type- Consumer Goods and Services and Producer Goods-
i. **Consumer Goods**- Where the goods and services are used for final consumption by the consumer, it is called as Consumer Goods and services.
E.g. – TV, Food, Home appliances.
ii. Producers Goods- Where the final product is used in production of other goods/ service in future, it is called as Producers goods.
E.g. Computer used for developing programs or software, Plant and Machinery used in manufacturing of goods.

Question 7: What is meant by intermediate consumption?
Answer: Intermediate consumption consists of the value of the goods and services consumed as inputs by a process of production, excluding fixed assets whose consumption is recorded as consumption of fixed capital; the goods or services may be either transformed or used up by the production process. For Example: In manufacturing leather shoes as final product leather used is an intermediate consumption.

Question 8: Distinguish between Intermediate goods and final goods
Answer: Intermediate goods used to produce other goods rather than being sold to final purchasers are not counted as it would involve double counting whereas final goods are those that meant for final consumption. The goods remains intermediate goods till it remains in production boundary. Once the product crosses production boundary it becomes final goods. For example, value of flour used in making bread would not be counted as it will be included while bread is counted. This is because flour is not an intermediate good in bread making process. Similarly, if we include the value of furniture in GDP, we should not be including the value of raw wood separately.

Question 9: what do you mean by domestic territory of a country?
Answer: Domestic territory refers to geographical or political boundary of country. It however does not include- international institutional (United nations, World health org.) and foreign embassies located within geographical territory but includes embassies of this country located

outside its geographical territory. It also includes, Indian Ship and Indian aircrafts performing operations outside country is also included in domestic territory.

Question 10: Are the two term 'Citizen' and Normal Resident same?
Answer: Citizenship is obtained either by birth or by operation of law. Thus if a person is born in India he becomes citizen of India or if the person applies for citizenship he becomes the citizen of India. Whereas, Normal resident of a country refers to an individual or an institution who ordinarily resides in the country and whose centre of economic interest also lies in that country. Normal residents include both, individuals and institutions.

Question 11: what do you understand by the term 'normal resident'?
Answer: Normal resident of a country refers to an individual or an institution who ordinarily resides in the country and whose centre of economic interest also lies in that country. Normal residents include both, individuals and institutions.

Question 12: Explain the usefulness of national income estimates. Or Describe the generally used concepts of national Income.
Answer 12: USEFULNESS OF NATIONAL INCOME ESTIMATES
1. National income accounts provide a comprehensive measure of the level of economic activity and index of economic growth of an economy
2. The distribution pattern of national income determines the pattern of demand for goods and services and enables businesses to forecast the future demand for their products.
3. Economic welfare depends to a considerable degree on the magnitude and distribution of national income.
4. The estimates of national income show the composition and structure of national income in terms of different sectors of the economy.
5. Combined with financial and monetary data, national income data provide a guide to make policies for growth, inflation, economic forecasting and to make projections about the future development trends of the economy
6. National income estimates throw light on income distribution and the possible inequality in the distribution among different categories of income earners
7. International comparisons in respect of incomes and living standards assist in determining eligibility for loans, and or other funds or conditions on which such loans, and/ or funds are made available.
8. The national income data are also useful to determine the share of nation's contributions to various international bodies.

Question 13: What do you understand by Transfer payment?
Answer: Transfer payments are unilateral payments for which no productive services are rendered in return in the current year. The recipient of this transfer payment do not make any contribution to current production in return for these payments
E.g Pension is given to a person in C.Y for rendering services in past.

Question 14: Distinguish between non-economic activities and economic activities
Answer: Economic activities as distinguished from non-economic activities include all human activities which create goods and services that can be valued at market price .Non-economic activities are those which produce goods and service, but are not exchanged in a market transaction so that do not command any market value. For eg: Hobbies, housekeeping and child rearing services of home makers and services of family members that are done out of love and affection.

Question 15: Describe the Importance of circular flow of income and relevance for measurement of national income.
Answer: Importance of Circular Flow of Income
1. It becomes easy to view the entire system as circular flow of income.
2. Circular flow of income pinpoints the condition of macroeconomics equilibrium.
3. It gives an idea as to how different sectors of economy interacts
4. It shows how different sectors of economy (Household sector, Business sector, Government and Rest of the world) are interdependent and are interrelated.
5. It helps in determining size of income. We can estimate national income with the help of output, income and expenditure phases of circular flow of income.

Question 16: Illustrate the circular flow of income
Answer: Circular flow of income refers to the continuous circulation of production, income generation and expenditure involving different sectors of the economy.
In production phase, firm produces goods and services with the help of factor services.
In income or distribution Phase, flow of factor incomes in form of rent, wages, interest and profits from firm to household. In expenditure phase, the income received by household is spent on consumption of goods and services and investment goods.

Question 17: Distinguish between real flow and Money flow
Answer:

Basis	Real flow	Money Flow
Meaning	Real flow consists of flow of factor service and flow of goods and services among different sector of economy	Money flow consists of flow of money for factor services in form of wages, rent, dividend and money expenditure incurred on purchase of goods and services
Kind of exchange	Exchange of goods and services	Exchange of Money
Alternative name	Also Known as Physical Flow	Also known as Nominal Flow

Question 18: What is the function of Household in Circular flow?
Answer: The Households provide factor services to Firms. In return to factor service they receive factor payments. The factor income received by Household is then spent on consumption of goods and services.

Question 19: What role does government play in a three-sector economy?
Answer: In a three sector economy the government adds the following key flows to the model:
1. Imposes taxes on households and business sector,
2. effects transfer payments to household sector and subsidy payments to the business sector,
3. purchases goods and services from business sector and factors of production from household sector, etc
4. Borrows from financial markets to finance the deficits occurring when taxes fall short of government purchases.

Question 20: What do you mean by leakage?
Answer: Money which is withdrawn from flow of income is called as Leakage or withdrawal.

Question 21: Mention the leakages and injections in two sector economy, three sector economy and four sector economy.
Answer: Leakage in two sector economy- 1) Savings of the Households
- Leakage in three sector economy- 1) Savings of the Households 2) taxes paid to government by Household and firms.
- Leakage in Four sector economy- 1) Savings of the Households 2) taxes paid to government by Household and firms 3) import .
- Injection in two sector economy- 1) Investment
- Injection in three sector economy- 1) Investment 2) Government expenditure
- Injection in Four sector economy- 1) Investment 2) Government expenditure 3) Exports

Question 22: What do you mean by Open economy?
Answer: Open economy is an economy which have economic relations with the rest of the world.

Question 23: What do you mean by closed economy?
Answer: Closed economy is an economy which do not have any economic relations with the rest of the world.

Question 24: Define net exports?
Answer: The foreign sector's contribution to aggregate expenditures; derived by subtracting imports from exports. Exports are expenditure by the foreigners on the domestically produced final goods and services, while imports are an expenditure on the goods and services produced abroad. Therefore, Net Exports = (X-M).

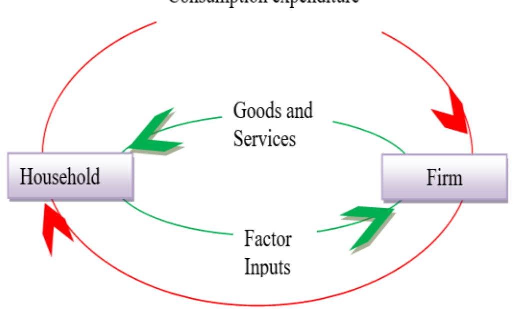
Question 25: Describe the component of aggregate expenditure in two, three and four

sector model.
Answer: Component of aggregate expenditure:

In two sector economy	**AD or Y = C + I**
In three sector economy	**AD or Y = C + I + G**
In four sector economy	**AD or Y = C + I + G + (X-M)**

Where:
1. Aggregate demand for household consumption (C),
2. Aggregate demand for investment goods, (I) and
3. Government sector's demand for goods and services (G),
4. Net exports (X – M)

Question 26: Describe circular flow of income in two sector model. (without financial Market)
Answer :
1. There are only two sectors in an economy. Households and the firms.
2. No savings is made by either by Household or by Firm.
3. Households spend entire income on goods and services and firm distributes entire proceeds in the form of factor payments.
4. The household sector supplies factor service to the firms and firm hires factor services from households.
5. The firm produces Goods and services and sell entire output to households.
6. Households receives Factor income from Firms and Spend entire income on consumption of goods and services.
7. In this two-sector model without investment it is assumed that all the income earned by the Household is spent on buying **Consumer Goods** from the firm, while all the proceed are distributed as factor payments to households. Thus, the equilibrium will be achieved.
8. In other words, there is **no leakage in income** and the below mentioned equations hold good-
   - Total production of Goods and services by firm= Total consumption of goods and services by households.
   - Factor Income of household= Total factor payments.
   - Income of the firm= Expenditure of the households.
   - Real flow = Money flow.



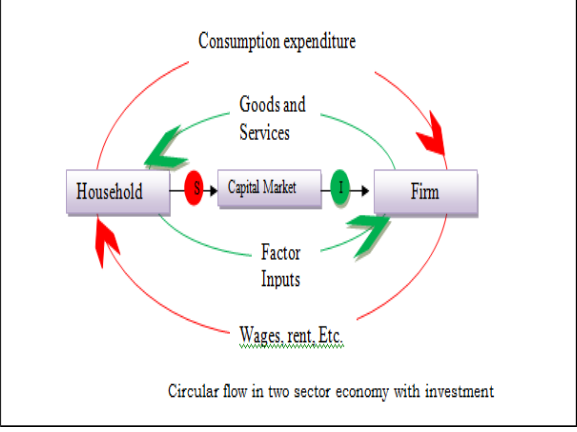
Question 27: Define circular flow in two sector model with Savings and Investment function.
Answer:
In Real world it is difficult to imagine that entire income earned by household is expensed and nothing is saved. Some part of the money is saved for future expenditures like education, marriage and other contingencies and this is called as **savings.** Similarly, even firms save the profit for future growth and expansions.

Assumptions
1. *We have assumed that savings is done only by Households and not firms.*
2. *All the savings made by the households are invested in capital Market.*

Savings, Leakage, reduction in flow of income and investment
1. Now, as some part of income is saved by the household and only remaining part of the income is expended by the household, the flow of money in this circular flow reduces.
2. This represents a sort of **withdrawal or leakage of expenditure** from the circular flow of income.
3. This withdrawal reduces the flow of income from the economy and forces the firm to reduce

the production and produce only consumer goods and not capital goods.
4. This savings is then invested in Capital Market (example bank, financial institutions). The firm then borrows from the capital market. And thus the saving which was made by households was made available to firm by the intermediary.
5. This encourages the economy and firms **produces capital goods in addition to consumer goods.**
6. Now the part of income (expenditure) flows from household to the firm in form of consumption expenditure and balance part flows in the form of investment with the help of intermediaries.
7. Savings by household is indicated by S while the investment is indicated by I. At equilibrium Savings of the household = investment of the firm i.e.
   S=I

There are three possible situations mentioned below-
1. If Savings= Investment, equilibrium is achieved
2. Is Savings > Investment, the flow of income declines
3. Is Savings < Investment, the flow of income rises



Circular flow in two sector economy with investment

Question 28: Explain circular Flow in three sector Model and Four sector model
Answer:
The three-sector model consists of Households, Firms and Government.
Household sectors:
1. Household sectors provides factor services to **Firm and Government**. For the factor service provided the households receives **Factor income** from the firm and Government.
2. Part of the income is spent by the households in **consumption of Goods and services** and some part is **saved** and some part is **paid togovernment in the form of taxes**.
3. As mentioned earlier, the **saving** acts as leakage of money form circular flow of income **taxes paid to government** also acts as **leakage to the circular flow.**
4. The Household also receives **transfer payments** from the government which acts as an **injection** to circular flow of money.

Government sector:
1. Government **collects taxes (Direct and indirect)** from Households and Firms. Taxes collected from the households and the firm acts as **leakage to circular flow of income** as it reduces the flow of money form the economy.
2. Government makes **transfer payments to households** (leakage) and provided subsides to them which acts as an injection to an economy
3. Government makes **payment for Goods and services for purchased** by them, which acts as an injection to an economy.
4. Government also **pays to the households for the factor services** received by them

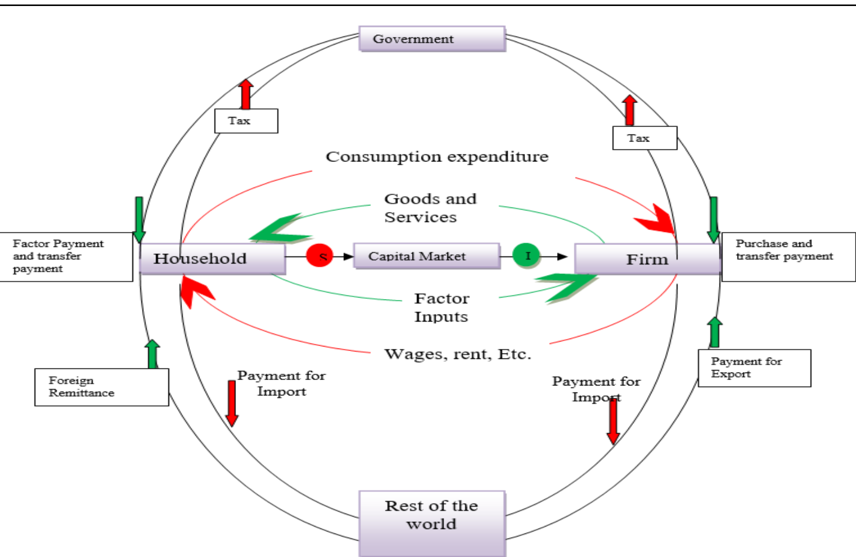
Firms:
1. Business sectors **hire the factor of production** for the purpose of production and make factor payments for the factor services received by them.
2. The Business **receives income form the consumption of Households and Government**
3. Also, the **taxes are paid by business sector** to the firm. This acts as leakage to circular flow of income.
4. The business sector receives subsidies and transfer payment form the Government which is an injection to circular flow of income.
5. Also, the **savings of the households are channelized by financial institutions to** meet the investment needs of the firms. This is an injection to circular flow of income.

1. The equilibrium condition of circular flow of income in 3 sector economy model is: S+T = I+G.
2. If (S+T)> (I+G)- Decline in flow of income
3. If (S+T)< (I+G)- Increase in flow of income

Rest of the world- include this part only in case of four sector economy
Explanation: Rest of the world also participates in circular flow of income.
The households imports goods and services and make payment to foreign sector. Whereas, if the household sector provides factor service to the foreign sector they receives foreign remittance.

Similarly, the business sectors exports goods and services to foreign sector and receives remittance and vice versa. Export is denoted by **X** while Import is denoted by **M.**
Thus, it can be said that X constitutes injection while M creates leakage into circular flow of income.

1. At equilibrium = S+T+M = I+G+X
2. If S+T+M > I+G+X, there is decline in flow of income.
3. If S+T+M < I+G+X, there is increase in flow of income



Question 29: Distinguish between national income determination in three and four sector economy models?
Answer:

Basis	Three Sector	Four Sector
Components	Household consumption (C) Business investment demand (I) Govt. Demand of Goods and services (G)	Household consumption (C) Business investment demand (I) Govt. Demand of Goods and services (G) Foreign sector (x-m)
Equation	C+I+G	C+I+G+(x-m)
Effect of GDP and NI	GDP at factor cost= National Income, provided for depreciation	GDP at factor cost= National Income, provided for depreciation and NFIA
New addition	Government sector	Govt. and Foreign sector
Effect	Presence of Govt. Adds injection to economy by spending and leakage in form of taxes	Apart from Govt. sector. Import acts as leakage while exports act as injection

Question 30: How do imports and exports with the rest of the world affect the level of income and output?
Answer:
Exports are the injections in the national income, while imports act as leakages or outflows of national income. Exports represent foreign demand for domestic output and therefore, are part of aggregate demand. Since imports are not demands for domestic goods, we must subtract them from aggregate demand.
An increase in the demand for a country's exports has an expansionary effect on equilibrium income, whereas an increase in imports has a contractionary effect on equilibrium income.

Question 31: What function does the System of National accounts (SNA) serve?
Answer: SNA, developed by United Nations, provide a comprehensive conceptual and accounting framework for compiling and reporting macroeconomic statistics for analyzing and evaluating the performance of an economy.

Question 32: Write notes on the system of regional accounts in India.
Answer:

1. Regional accounts **provide an integrated database** on the innumerable transactions taking place in the regional economy and help decision making at the regional level.
2. At present, **practically all the states and union territories** of India compute state income estimates and district level estimates.
3. State Income **or Net State Domestic Product (NSDP**) is a measure in monetary terms of the volume of all goods and services produced in the state within a given period of time (generally

a year) accounted without duplication.

4. **Per Capita State Income** is obtained by dividing the NSDP (State Income) by the midyear projected population of the state.
5. The state level estimates are prepared by the State Income Units of the respective State Directorates of Economics and Statistics (DESs). **The Central Statistical Organisation assists the States** in the preparation of these estimates by rendering advice on conceptual and methodological problems.
6. In the preparation of state income estimates, certain activities such as are railways, communications, banking and insurance and central government administration, that cut across state boundaries, and thus their economic contribution cannot be assigned to any one state directly are known as the '**Supra-regional sectors'** of the economy. The estimates for these supra regional activities are compiled for the economy as a whole and allocated to the states on the basis of relevant indicators.

Part B- National income aggregate

Question 33: Define 'Net Factor Income from Abroad'

Answer: The difference between the aggregate amount of factor income earned by a country's citizens and companies from rest of the world , and the aggregate amount of factor income paid to rest of the world.`

It shall be noted that NFIA can be zero, positive or negative.

If Net Factor income from abroad is positive, then GNP_{MP} would be greater than GDP_{MP}

And if Net Factor Income from Abroad is negative, then GNP_{MP} would be lesser than GDP_{MP}.

Question 34.What do you understand by 'factor cost'.

Answer: Factor cost is the sum total factor payment as paid to factors of production. In addition to factor cost, the market value of goods and services will include indirect taxes that are product taxes & taxes on production. The government gives subsidy on many goods and services. The market Price will be lower by the amount of subsidies on products and production which the government pays to the producer. Hence, the market value of final expenditure would be more than the total obtained at factor cost by the amount of product and production taxes whereas it is reduced by the value of subsidies. Factor cost is derived by subtracting net indirect taxes from market price.

Factor cost = Market price- Net indirect taxes or Market price – Indirect taxes+ subsidies.

Question 35: Differentiate between 'taxes on production' and 'product taxes'

Answer: Product taxes like excise duties, customs, sales tax, service tax etc., levied by the government on goods and services, and

Taxes on production, such as, factory license fee, taxes to be paid to the local authorities, pollution tax etc. which are unrelated to the quantum of production.

Thus product taxes are related to the quantum pf production and are levied by the government on goods and services whereas taxes on production are not related to quantum of production. Both these taxes are known as indirect taxes.

Question 36: What is the difference between the concepts 'market price' and 'factor cost in national income accounting?

Answer:

S.No.	Market price	Factor Cost
1.	Market prices refer to the final money value of goods & services i.e. Net Value added in production of goods & services.	Net Value added by each entity gets distributed as income to factor owners in the form of Rent, Wages, Interest & Profit, this is called as factor cost.
2.	Value of Market prices= Value of Factor Cost + Indirect Taxes – Subsidies.	Value of Factor Cost = Value of Market Prices – Indirect taxes + subsidies.
3.	Measurement at market prices constitute	Measurement at market prices constitutes

	external sale price angle.	internal value addition angle.

Question 37: Define National Income, GDPMP, GDPFC, NDPMP, NDPFC, GNPFC, GNPMP, NNPFC, NDPFC, NNPMP and NDPMP.
Answer:
i. National Income: National Income is defined as money value of final goods and services produced by the normal residents of a country, whether operating within the domestic territory of the country or outside produced within in an accounting year.
ii. GDPMP: GDP at Market price is the value of all final goods and services at their market price produced within the domestic territory of a country by normal residents, whether nationals or non- nationals, inclusive of depreciation during a year
iii.GDPFC: Gross Domestic Product at factor cost is the sum total of earnings received by factors of productions in terms of wages, rent, interest and profits, within the domestic territory of the country, inclusive of depreciation.
iv.NDPMP: NDP at Market price is the value of all final goods and services at their market price produced within the domestic territory of a country by normal residents, whether nationals or non- nationals, net of depreciation during a year.
v. NDPFC: Gross Domestic Product at factor cost is the sum total of earnings received by factors of productions in terms of wages, rent, interest and profits, within the domestic territory of the country, net of depreciation.
vi. GNPFC: Gross Domestic Product at factor cost is the sum total of earnings received by factors of productions in terms of wages, rent, interest and profits by the normal residents of the country, inclusive of depreciation.
vii. GNPMP: GNP at Market price is defined as money value of all final goods and services at their market price produced by normal resident of a country, inclusive of depreciation during a year.
viii. NNPFC: Gross Domestic Product at factor cost is the sum total of earnings received by factors of productions in terms of wages, rent, interest and profits by the normal residents of the country, net of depreciation.
ix. NDPFC: Gross Domestic Product at factor cost is the sum total of earnings received by factors of productions in terms of wages, rent, interest and profits, within the domestic territory of the country, net of depreciation.
x. NNPMP: GNP at Market price is defined as money value of all final goods and services at their market price produced by normal resident of a country, net of depreciation during a year.
xi. NDPMP: NDP at Market price is the value of all final goods and services at their market price produced within the domestic territory of a country by normal residents, whether nationals or non- nationals, net of depreciation during a year.

Question 38: what are the elements which are excluded from calculation of GNP
Answer: Pure financial transactions such as purchase and sale of share, bonds, debentures etc. Sale and purchase of second-hand products. Transfer payments made for unilateral transfers

Question 39: Distinguish between nominal GDP and real GDP or Draw the basis of distinction between GDP current and constant prices.
Answer: GDP in terms of current market prices, termed 'nominal GDP' or GDP at current prices, the national income accountants also calculate 'real GDP 'or GDP at constant prices which is the value of domestic product in terms of constant prices of a chosen base year. For example the GDP of 2015-16 may be expressed either at prices of that year or at prices that prevailed in 2011-12. The former case is known as nominal GDP or GDP at current prices and it will be affected by price changes. But the later case is known as real GDP or GDP at constant prices and it will change only when there has been a change in physical output.

GDP at Current will be affected by price changes and change in output, but GDP at Constant price will change when there has been a change in physical output.

Question 40: Why GDP expressed at constant price is known as real GDP?
Answer 40:
The GPD is the value derived by multiplying the price of product x number of units produced.

The GDP may change on account of change in either of the factor. Thus, GDP at current prices may not reflect REAL Domestic Output This is because the GDP may rise because of rise in price of goods and service without the actual increase in production. This may lead to misleading figures. On the other hand, GDP at Constant price is affected only by change in quantities of final goods and services. Therefore, if GDP is expressed at constant price it takes price of base year and thus the change is only on account of change in production.

The price index of base year is taken as 100

Question 41: what do you mean by Private income? Personal Income and Personal Disposable income?
Answer:
Private income: Private income is the income earned by both, household and Business sectors including the current transfer payment received from Government and rest of the world.
It is the sum of factor income from all sources+ transfer payment from Govt. and rest of the world.
It seeks to explain the portion of national income held by government and private sector
Private income is the pre-tax income of private sector. To arrive at the Personal Income following adjustments need to be made.

	NNP_{FC}	10000
Less	Income from property and entrepreneurship accruing to govt. commercial enterprises and admin department. Ex. Air India, Indian railway, BHEL, SAIL	(350)
Less	Savings of non- Departmental enterprises of govt.	(30)
Add	Interest on national debt *	20
Add	Net Current Transfer payment received from Govt. dept.**	120
Add	Net transfer payment received from rest of the world**	70
	Private Income	830

Personal incomes: It is the sum total of all current income actually received by household from all sources. It includes the sum earned by the household in the form of factor income including transfer payments.

	Private Income	830
Less	Undistributed profits	30
Less	Corporate taxation	70
	Personal Income	730

Personal disposable incomes: It represents the amount of income which is available for disposable (Savings and expenditure) by household the way they desire.

	Personal Income	730
Less	Miscellaneous receipts of Govt. department. Fines, fees etc	30
Less	Personal taxation	60
	Personal Income	640

Question 42: Define Per Capita Income
Answer: The GDP per capita is a measure of a country's economic output per person. It is obtained by dividing the country's gross domestic product, adjusted by inflation, by the total population. It serves as an indicator of the standard of living of a country.

Question 43: How does Personal Income differ from Disposable Personal Income?
Answer: Personal income is a measure of the actual current income receipt of persons from all sources. Disposable personal income is what is available for their consumption or savings and is derived from personal income by subtracting the direct taxes paid by individuals and other compulsory payments made to the government.
Personal Income = NI + Income received but not earned – Income earned but not received.
Disposable Personal Income = PI – Personal Income Taxes

Question 44: Define 'Private income' as used in India.
Answer: National income plus the sum of government transfer payments and interest on national debt and subtracting the property income of government departments and profits of government enterprises.

Question 45: How would you arrive at Private Income, Personal Income and personal Disposable income from GDPMP?
Answer:

Particulars
GDPMP – depreciation- Net indirect taxes + NFIA = NNPFC (National income)
NNPFC- Income from property and entrepreneurship accruing to govt. commercial enterprises and admin department- Savings of non- Departmental enterprises of govt.+ Interest on national debt + Net Current Transfer payment received from Govt. dept+ Net transfer payment received from rest of the world = private Income
Private income – undistributed profits- Corporate taxation= Personal Income
Personal Income - Miscellaneous receipts of Govt. department. Fines, fees etc. – personal taxation = personal Disposable income

Question 46: Explain with illustrations the limitations of national income computation.
Answer:
1. Income Distribution: Per capita income determines the average income earned by residents of the country. Increase in National income and per capita income is sign of Economic welfare. However the distribution of income also plays an important role in this regards. The relatively inequality in distribution of income implies that the gap between rich and poor is widening while the increase in per capita income has not benefitted the society as a whole.
2. Increase in GDP is taken as sign of economic welfare but if the increase in GDP is on account of Long working hours, Employment of child labour, and polluted working environment, such increase in GDP is not the real sign of welfare.
3. 'How much is produced' determines GDP. It does not reflect 'what is produced'. Thus if the government is producing more weapons, guns and spending more on National and state security GDP will rise but the welfare is ignored.
4. Also if more of capital goods are produced the GDP will rise but the welfare may not increase in same manner.
5. Exclusion of Non Market Transaction- Some of the non-market transaction increases welfare but does not contribute to GDP. Such as providing music class to society children for fun and other similar activity.
6. Exclusion of leisure- While the Leisure adds to Welfare it is not counted for GDP and hence GDP increase may call for long working hours and leisure may be ignored.

Part C – Measurement Of National Income

Question 47: What are the precautions to be taken in estimation of national Income by Value added method?
Answer:
1. Production for self- consumption- For example the vegetation grown in backyard of house shall also be included in computation of production. The cost shall be taken as imputed cost, which shall be measured using appropriate basis.

2. Own account production of fixed assets by government, enterprises and households- Such as building built by business firm for own use.
3. Imputed rent of owner-occupied houses- people live in their own houses. The proposition is that, if they don't have their own house they must have brought in on rent and thus contributed to National Income calculation. Thus, value of Owner-occupied houses shall also be calculated on Suitable basis.
4. Service of House wives shall not be included in computation of National Income. Therefore, a mother cooking meal at home or taking care of children shall not be included.
5. Sale and purchase of existing commodities or second-hand goods shall not be included, However the brokerage services relation to the same shall be included.
6. Sale and purchase of Share and Bonds are excluded as they represent transfer of purchasing power only.

Question 48:Define 'mixed income of self- employed.

Answer: Mixed income includes all those incomes which are difficult to separate e.g. labour income from capital income because people provide both labour and capital services. Like the case with self-employed people like CAs, lawyers, engineers, traders, proprietors etc. In economies where livelihood production and small commodity production is dominant, most of the incomes of people would be mixed type. In sectors such as agriculture, trade, transport etc. in underdeveloped countries including India, it is difficult to differentiate between the labour component and capital component of incomes of the people. In order to overcome the difficulty of new category of incomes called 'mixed income' is introduced which includes all those incomes which are difficult to separate.

Question 49: What is the difference between 'national' and 'domestic'?

Answer: The term 'national' refers to normal residents of a country who may be within or outside the domestic territory of a country and is a broader concept compared to the term 'domestic' which refers to the domestic territory of the country.

National = Domestic + Net Factor Income from Abroad (NFIA)

Question 50: How do you arrive at 'gross value added'?

Answer: Gross value added is obtained by adding Production of all primary sector, secondary sector and tertiary sector less intermediate consumption. The value added method measures the contribution of each producing enterprise in the domestic territory of the country in an accounting year and entails consolidation of production of each industry less intermediate purchases from all other industries. This method of measurement shows the unduplicated contribution by each industry to the total output.

Question 51: what are the element of Compensation to employee?

Answer: Compensation to labour includes-

a) Wages and Salaries in cash, including Bonus DA, HRA, Travelling allowance (TA not to be considered if it is paid for office work, LTA, sick leave, etc.
b) Other income such as Retirement benefits, provision for pensions, gratuity, group insurance.
c) Payment in kind such as rent-free accommodation, free medical facility, free education facilities.

Question 52: what do you mean by operating surplus?

Answer : Operating surplus refers to sum total of income received from Property (Rent, interest, royalty) and Income from entrepreneurship (Profit)

Question 53: why should the aggregate final expenditure of an economy be equal to aggregate factor payment?

Answer: In a simplified economy, it is assumed that there are no taxes and no import or exports. Also, whatever is received as factor payment by factors of production are fully spent on consumption of goods and services. Hence it is rightly said that the aggregate final expenditure of an economy be equal to aggregate factor payment.

Question 54: How to avoid double counting in calculation of national income by Value added method?

Answer: Double counting can be avoided by-
1)Taking value of final goods and services less the value of intermediate consumption.
2)Sum of value added by each producing unit.

Question 55: What do you understand by factor income?
Answer: Factor income refers to income received by factors of production for the factor services rendered by them in the process of production

Question 56: What are the four factors of production and remuneration paid to them?
Answer: The four factors of productions are Land, Labour, Capital and Enterprise. The remuneration paid to them is in the form of Rent, Wages, Interest and Profit respectively.

Question 57: What do you understand by 'value added'?
Answer: By value added we mean difference between value of output and purchase of intermediate goods.

Question 58: How is production for self consumption treated in national income accounts?
Answer: Production for self-consumption added under Value Added Method because it adds to current flow of goods & services thus, its imputed value should be included.

Question 59: What are the different methods of national income computation?
Answer:

Net product or Value-Added Method National income by value added method is the sum total of net value added at factor cost across all producing units of the economy less intermediate purchases from all other industries.

Income Method-
Under Factor Income Method, also called **Factor Payment Method or Distributed Share Method,** national income is calculated by summation of factor incomes paid out by all production units within the domestic territory of a country as wages and salaries, rent, interest, and profit.
NNP FC or National Income = Compensation of employees
+ Operating Surplus (rent + interest+ profit)
+ Mixed Income of Self- employed
This will give us NDP at factor cost
+ Net Factor Income from Abroad

Expenditure Method:
In the expenditure approach, national income is the aggregate final expenditure in an economy during an accounting year.
- Private final consumption expenditure- Consumption expenditure done by households.
- Investment Expenditure- Investment expenditure done by producers and Government in an economy.
- Government final consumption expenditure- Consumption expenditure done by government.
- Net exports- foreign component of expenditure in the form of net exports.

Part D- Keynesian Model

Question 60: Define equilibrium output?
Answer. Equilibrium output occur when the desired amount of output demanded by all the agents in the economy exactly equals the amount produced in a given time period. In other words, an economy is said to be in equilibrium when the production plans of the firms and the expenditure plans of the households match.

Question 61: Define consumption function?
Answer : Functional relationship between aggregate consumption expenditure and aggregate

disposable income, expressed as $C = f(Y)$. shows the level of consumption (C) corresponding to each level of disposable income (Y). The consumption function describes the functional relationship between consumption spending and disposable income.

Question 62: Explain the concept of marginal propensity to consume?
Answer : The value of the increment to consumer expenditure per unit of increment to income; termed *b* such that $0 < b < 1$. The concept of MPC describes the relationship between change in consumption (ΔC) and the charge in income (ΔY). MPC (b) tends to decline at higher income levels, although most analysis of consumption generally works with a constant MPC.
MPC = $\Delta C / \Delta Y = b$

Question 63: Define average propensity to consume?
Answer : Average propensity to consume is the ratio of consumption to Income denoted by C/Y

Question 64: Distinguish between saving function and marginal propensity to save
Answer : The savings function shows the saving at each level of disposable income.
Whereas, the increment to saving per unit in disposable income is called as MPS (1-b)

Question 65: What is meant by autonomous expenditure?
Answer : Autonomous consumption expenditure is the minimum expenditure to sustain life irrespective of size of income, thus it is income inelastic. The expenditure which do not vary with the level of income. They are determined by factors other than income such as business expectations and economic policy. They are generally made by ----- in the public sector with a view to provide public utilities & to make maximum social benefit.

Question 66: What would happen if aggregate expenditures were to exceed the economy's production capacity?
Answer : Aggregate expenditures in excess of output lead to a higher price level once the economy reaches full employment. Nominal output will increase, but it merely reflects higher prices, rather than additional real output.

Question 67: Outline the relationship between marginal propensity to consume and multiplier?
Answer : The marginal propensity to consume is the determinant of the value of the multiplier. The higher the (MPC) the greater is the value of the multiplier. On the contrary, higher the MPS, lower will be the value of multiplier and vice-versa. The maximum value of multiplier is infinity when the value of MPC is 1 i.e, the economy decides to consume the whole of its additional income. We conclude that the value of the multiplier is reciprocal of MPS.

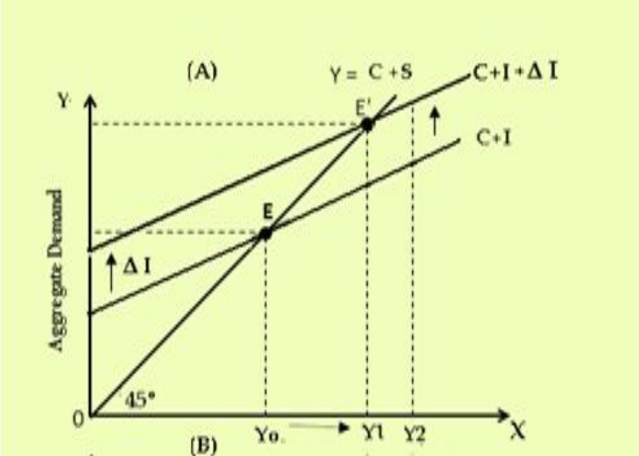
Question 68: What is the effect of income leakages on multiplier?
Answer: If the increased income goes out of the cycle of consumption expenditure, there is leakage from income stream which reduces the effect of the multiplier. The more powerful the leakages are, the smaller will be the value of multiplier.

Question 69: How do imports affect investment multiplier?
Answer: The greater the value of propensity to import v, the lower will be the autonomous expenditure multiplier because increased demand for consumer goods being met through import acts as a leakage.

Question 70: Explain Keynesian concept of equilibrium aggregate income? Illustrate your answer with appropriate diagrams.

Answer : Equilibrium output occur when desired amount of output demanded by all the agents in the economy exactly equals the amount produced in a given time period. Logically, an economy can be said to be in equilibrium when the production plans of the firms & expenditure plans of the households match.

Y (AS)	C	ΔC	ΔY	I	AD	
0	20	-	-	10	30	I : Constant at all levels of Y. MPC = ΔC/ ΔY = 10/20= 0.5
20	30	10	20	10	40	
40	40	10	20	10	50	
60	50	10	20	10	60	
80	60	10	20	10	70	
100	70	10	20	10	80	
120	80	10	20	10	90	



Question 71: Explain national income determination in a two, sector economy?

Answer 5: According to Keynesian Theory of income determination, the equilibrium level of national income is a situation in which aggregate demand (C+I) is equal to aggregate supply (C+S).

C + I = C + S = Y or I = S

In a two-sector economy, the aggregate demand (C+I) refers to the total spending in the economy i.e it is the sum of demand for the consumer goods (C) and investment goods (I) by households and firms respectively. The aggregate expenditure line is flatter than the 45-degree line because, as income rises, consumption also increases, but by less than the increase in income.

Diagram:

Question 72: Define multiplier. Explain the functioning of multiplier with suitable example?

Answer :

1. The multiplier refers to the phenomenon whereby a change in an injection of expenditure will lead to a proportionately larger change (or multiple change) in the level of national income.
2. Multiplier explains how many times the aggregate income increases as a result of an increase in investment.
3. When the level of investment increases by an amount say ΔI, the equilibrium level of income will increase by some multiple amounts, Δ Y.
4. The ratio of ΔY to ΔI is called the investment multiplier, k.
   The size of the multiplier effect is given by Δ Y = k ΔI.
5. For example, if a change in investment of Rs. 2000 million causes a change in national income of Rs. 6000 million, then the multiplier is 6000/2000 =3. Thus, multiplier indicates the change in national income for each rupee change in the desired investment.
6. The value 3 in the above example tells us that for every Rs. 1 increase in desired investment expenditure, there will be Rs. 3 increase in equilibrium national income. Multiplier, therefore, expresses the relationship between an initial increment in investment and the resulting increase in aggregate income
7. The process behind the multiplier can be compared to the 'ripple effect' of water.

Question 73: Describe the rationale behind multiplier? Point out the factors that weaken the multiplier?

Answer :

Increase in income due to increase in initial investment, does not go on endlessly. The process of income circulation slows down and ultimately comes to a halt. Causes responsible for the decline in income are called leakages. Income that is not spent on currently produced consumption goods and services may be regarded as having leaked out of income stream. If the increased income goes out of the cycle of consumption expenditure, there is leakage from income stream which reduces the effect of multiplier. The more powerful these leakages are the smaller will be the value of multiplier.

The factors that weaken the effect of multiplier (causes of leakages) are as follows:

1. **Progressive rates of taxation** which result in no appreciable increase in consumption despite increase in income.
2. **High liquidity preference** and the idle saving or holding of cash balances and an equivalent fall in marginal propensity to consume.
3. Increased demand for consumer goods being met out of the existing stocks or through imports.
4. Additional income spent on purchasing existing wealth or purchase of government securities and shares from shareholders or bond holders.
5. Undistributed profits of corporations.
6. Part of increment in income used for payment of debts.
7. Case of full employment additional investment will only lead to inflation, and
8. Scarcity of goods and services despite having high MPC.

Question 74: Outline the changes in equilibrium aggregate income on account of changes in its determinants?

Answer: There are many determinants which influence the change in equilibrium aggregate income. They are as follows:

1. **Land:** It provides him with agricultural goods and raw material for production. If the land is fertile and is not handicapped in any way say by salinity, water logging, shortage of rainfall and adverse climate, the size of the national income will be quite large, if the quality of land is poor, the size of the national income will be small.
2. **Labour:** If the labour is efficient and its size is consistent with the means of subsistence, the size of the national income will be large & if the labour is underfed, under clothed and unskilled then the size of the national income will be small.
3. **Capital:** If the capital consists of primitive tools, the size of the national income cannot be large. But if modern types of plant are used for production, then they can enhance the productive capacity of a country.
4. **Entrepreneurs:** If the captains of the industries are efficient, they will combine, the various of production to the optimum proportion and so the volume of total production will be quite large, if managerial skill is lacking in the country, the size of the national income will be small.
5. **State of technical knowledge** is advanced, and it increased the production capacity of the country then it will directly increase the size of national income and vice-versa.
6. **Political** instability greatly hampers economic progress. In case of political instability, the production will be adversely affected and so the size of national income will be small.

Question 75: Elucidate the relationship between consumption function and saving function?

Answer: The consumption and saving functions, the 45^0 line is drawn to split the positive quadrant of the graph and shows the income-consumption relation with Y = C (AD=Y) at all levels of income. All points on the 45^0 line indicate the aggregate expenditure equal aggregate output; i.e. the value of the variables measured on the vertical axis (C+I) is equal to the value of the variable measured on the horizontal axis (i.e. Y) Because aggregate expenditures equal total output for all points along the 45-degree line, the line maps out all possible equilibrium income levels. As long as the economy is operating at less than its full employment capacity, producers will produce any output along the 45-degree line that they believe purchasers will buy.

Problem on Value added Method

1. From the following Information, Calculate the National Income using Net output method.

Sr. No.	Particulars	Rs. in crore
1	Gross value of Output at Market price	16000
2	Consumption of Fixed asset	1300
3	Net Factor income from Abroad	300
4	Net Indirect taxes	750
5	Value of Intermediate consumption	6000

2. From the following Information, Calculate the National Income using Net output method.

Sr. No.	Particulars	Rs. In Crore
1	Value of Output of Primary sector	2000
2	Value of Intermediate consumption in primary sector	600
3	Value of Output of Secondary sector	2500
4	Value of Intermediate consumption in Secondary sector	900
5	Value of Output of Tertiary sector	3000
6	Value of Intermediate consumption in Tertiary sector	800
7	NFIA	-150
8	Net indirect taxes	450
9	Depreciation	200
10	Interest	1300

3. From the following Information, Calculate the National Income using value added method.

Sr. No.	Particulars	Rs. In Crore
1	Value of Output of Primary sector	2400
2	Value of Intermediate consumption in primary sector	1200
3	Value of Output of Secondary sector	600
4	Value of Intermediate consumption in Secondary sector	300
5	Value of Output of Tertiary sector	900
6	Value of Intermediate consumption in Tertiary sector	150
7	Factor Income received from abroad	30
8	Factor Income paid abroad	60
9	Indirect taxes	150
10	Consumption of fixed capital	240
11	Subsidies received from Government	60

4. From the following Information, Calculate the National Income using Product method.

Sr. No.	Particulars	Rs. In Crore
1	Value of Output of Primary sector	900
2	Value of Intermediate consumption in primary sector	800
3	Value of Output of Secondary sector	400
4	Value of Intermediate consumption in Secondary sector	350
5	Value of Output of Tertiary sector	320
6	Value of Intermediate consumption in Tertiary sector	100
7	NFIA	-15
8	Net indirect taxes	85
9	Depreciation	80

5. Suppose there are three producing units in an economy A, B and C. With the help of details given below calculate the GPP_{MP} and National Income.

Sr. No.	Particulars	Rs. In Crore
1	Sales by A	1000
2	Sales by B	1200

3	Sales By C	1300
4	Closing stock of A	300
5	Opening stock of A	200
6	Change in stock of B	-100
7	Change in stock of C	-200
8	Depreciation	300
9	Purchase of A	600
10	Purchase of B	400
11	Purchase of C	200
12	Exports of A	400
13	Imports of B	200
14	NFIA	170

6. Calculate National Income and NDP at Market price using Product method

Sr. No	Particulars	Rs. In crore
1	Gross Value of output at market price	900
2	Value of Intermediate consumption	275
3	Depreciation	75
4	Indirect tax	40
5	Subsidies	5
6	NFIA	-12.5

7. Calculate National Income and GDP at Market price using Product method

Sr. No.	Particulars	Rs. In Crore
1	Value of Output of Primary sector	1200
2	Value of Output of Secondary sector	900
3	Value of Output of Tertiary sector	700
4	Value of Intermediate consumption in Primary sector	300
5	Value of Intermediate consumption in Secondary sector	100
6	Value of Intermediate consumption in Tertiary sector	200
7	NFIA	25
8	Consumption of fixed capital	30
9	Indirect taxes	75
10	Subsidies received from Government	10

8. Calculate NI from the data given below

Sr no.	Particulars	Amount
1	Domestic sales	10800
2	Change in stock	1200
3	Import of RM	600
4	Exports	1100
5	Indigenous purchase	3600
6	Depreciation	450
7	NIT	300
8	NFIA	-20

Problem on Income Method- labour Income

9. Calculate the compensation to the employee from the data given below

Sr no.	Particulars	Rs. In crore
1	Wages and Salaries	9000
2	Bonus	750
3	Employer's contribution to gratuity	700
4	Value of free education	300
5	Value of free accommodation	200

10. Calculate the compensation to the employee from the data given below

Sr no.	Particulars	Rs. In crore
1	Wages and Salaries	9000
2	Bonus	750
3	Employee's contribution to gratuity	700
4	Value of free education	300
5	Value of free accommodation	200

11. Calculate the compensation to the employee from the data given below.

Sr no.	Particulars	Rs. In lakh
1	Wages and Salaries in cash	12350
2	LTA	2435
3	Free food to the employee during lunch	456
4	Commission paid to sales staff	570
5	Interest free loan to staff	1500
6	Travel expense on business tour, reimbursed by employee	350

12. Calculate the compensation to the employee from the data given below.

Sr no.	Particulars	Rs. In lakh
1	Wages and Salaries in cash	520
2	LTA	300
3	Free food to the employee during lunch	200
4	Commission paid to sales staff	159
5	Compensation paid to injured worker by insurance company	176
6	Travel allowance paid to staff from home to office	250
7	Employees contribution to social security fund	155

13. Calculate the compensation to the employee from the data given below.

Sr no.	Particulars	Rs. In lakh
1	Salaries and Wages	7000
2	Commission paid to sales staff	1200
3	Travelling allowance paid towards actual expense	300
4	Employer's contribution to Social security	540
5	Employee's contribution to Social security	320
6	Interest free loan given to employee	330
7	Old age pension	120
8	Rent free accommodation	110
9	LIC premium paid by employer	600
10	Income tax of employee	400
11	Employer's contribution to PF	250
12	Free meal coupons to employee	450

Problem on Income Method- Operating Surplus

14. Calculate the operating surplus from the data given below

Sr. no.	Particulars	Rs in lakhs
1	Interest	3500
2	Rent	500
3	Undistributed Profits	1000
4	Subsidies	200
5	Dividend	800

15. Calculate the operating surplus from the data given below

Sr. no.	Particulars	Rs in lakhs
1	Interest	625
2	Rent	50
3	Undistributed Profits	375
4	Mixed income	250
5	Dividend	225
6	Corporate taxation	75
7	Royalty	50

16. Calculate the operating surplus from the data given below

Sr. no.	Particulars	Rs in lakhs
1	Rent	170
2	Interest	180
3	Undistributed profits	220
4	Mixed income	400
5	Dividends	200
6	NIT	210
7	Corporate tax	80

Problem on Income Method- Random

17. Calculate NDP_{FC} and National Income from the data given below

Sr. no	Particulars	Amount in crore
1	Undistributed profits	200
2	Rent	1000
3	Wages and Salaries	10000
4	Net factor income from abroad	220
5	Interest paid by production units	1300
6	Royalty	700
7	National debt interest	300
8	Contribution to PF by employee	2000
9	Contribution to PF by employer	2000
10	Dividends	1000
11	Corporate taxation	200

18. Calculate GDP at Market price, NDP at factor cost and National Income using income approach.

Sr. No	Particulars	Amount
1	Compensation to employees	925
2	Consumption of fixed assets	50
3	Rent	200
4	Interest	250
5	Dividend	100
6	Profits	550
7	NFIA	-25
8	Net indirect taxes	125

19. From the following data, calculate GDP at market price and National income by Income Method.

Sr. No.	Particulars	Amount in Crore
1	Interest	150
2	Rent	250
3	Dividends	240

4	Undistributed profits	290
5	Compensation to employees	1000
6	NFIA	30
7	Corporate tax	110
8	NIT	60
9	Depreciation	50

20. Calculate the national Income and net domestic product at factor cost from the following data:

Particulars	Amount in crore
Wages and Salaries	1200
Rent	600
Interest	250
Dividend	150
Undistributed profits	500
Corporate taxation	300
Mixed income	200
Net factor income from abroad	100
Depreciation	50

21. Calculate the national Income and net domestic product at factor cost from the following data and GDP_{MP}

Sr no.	Particulars	Amount
1	Employee contribution to social security scheme	160
2	Compensation to employees	3800
3	Rent	400
4	Interest	300
5	Profit	740
6	Depreciation	200
7	NFIA	-40
8	Indirect taxes	1000
9	Subsidies	200

22. Calculate the national Income and net domestic product at factor cost from the following data

Sr no.	Particulars	Amount
1	NFIA	-30
2	Depreciation	40
3	Net Indirect taxes	300
4	Wages and salaries	3800
5	Dividend	500
6	Rent	200
7	Interest	150
8	Profits	800
9	Employers contribution to social security scheme	200

Problem on Expenditure Method

23. Calculate the national Income using the following data.

Sr. No	Particulars	Rs. In 000`crore
1	Private Final consumption expenditure	90
2	Profits	10
3	Government Final consumption expenditure	40
4	NIT	10
5	Gross domestic capital formation	25

6	Change in stock	5
7	NFIA	-4
8	Consumption of Fixed capital	2
9	Net Imports	3

24. From the following data, calculate- GDP_{MP}, NNP_{FC} by expenditure method

Sr. No	Particulars	Rs. In 000`crore
1	Private Final consumption expenditure	200
2	Net domestic capital formation	40
3	Government final consumption expenditure	100
4	Consumption of fixed assets	12
5	NFIA	-2
6	Indirect taxes	20
7	Net exports	-4
8	Subsidies	4
9	Interest	12

25. From the following data, calculate- GNP_{MP}, NNP_{FC} by expenditure method

Sr. No	Particulars	Rs. In 000`crore
1	Net capital formation	200
2	Private final consumption expenditure	1000
3	Government final consumption expenditure	300
4	Depreciation	50
5	Net indirect taxes	200
6	Net factor income from abroad	-10
7	Net exports	10

26. From the following data National incomeby expenditure method

Sr. No	Particulars	Rs. In 000`crore
1	Consumption	150
2	Net Investment	50
3	Government purchases	20
4	Exports	20
5	Imports	40

27. From the following data, calculate- GDP_{MP}, NNP_{FC} / national incomeby expenditure method

Sr. No	Particulars	Rs. In 000`crore
1	Gross residential construction investment	3000
2	Consumption of Fixed assets	500
3	Imports	1000
4	Government purchases of goods and services	10000
5	Inventory Investment	1000
6	Exports	2000
7	Indirect taxes	1000
8	NFIA	-500
9	Personal consumption expenditure	35000
10	Gross public investment	2000
11	Gross business fixed investment	3000

28. From the following data, calculate- GDP_{MP}, NNP_{FC} / national incomeby expenditure method

Sr. No	Particulars	Rs. In 000`crore
1	Corporate profits	682
2	Exports	1346
3	NFIA	40
4	Mixed income	806
5	Personal Consumption expenditure	7314
6	Depreciation	800
7	Wages	6508
8	Interest	1000
9	Domestic investment	1442
10	Government expenditure	2196
11	Rental Income	34
12	Imports	1408

29. From the following data, calculate- GDP_{MP}, NNP_{FC} / national incomeby expenditure method

Sr. No	Particulars	Rs. In 000`crore
1	NFIA	25
2	Net Exports	-75
3	Change in stock	-15
4	Net Indirect tax	400
5	Net domestic fixed capital formation	250
6	Consumption of fixed capital	50
7	Private final consumption expenditure	2500
8	Government final consumption expenditure	1000

30. From the following data, calculate- NDP_{MP}, NNP_{FC} / national incomeby expenditure method

Sr. No	Particulars	Rs. In 000`crore
1	Private final consumption expenditure	1800
2	Net exports	-60
3	Government final consumption expenditure	300
4	NIT	90
5	Net domestic capital formation	210
6	NFIA	30

31. From the following data, calculate- GNP_{MP}, NNP_{FC} / national incomeby expenditure method

Sr. No	Particulars	Rs. In 000`crore
1	Indirect tax	650
2	Subsidies	50
3	NFIA	-100
4	Net domestic capital Formation	1200
5	Personal Consumption expenditure	4000
7	Government final Consumption expenditure	1000
8	Imports	400
9	Exports	300
10	Consumption of fixed capital	200

Mix Problems

32. From the following calculate the compensation to the employee

Sr. No	Particulars	Rs. In 000`crore
1	Operating surplus	100
2	Mixed income of self-employee	60
3	Net indirect tax	30
4	Gross value added at Market price	250

5	Consumption of Fixed capital	20

33. From the following calculate the compensation to the employee

Sr. No	Particulars	Rs. In 000`crore
1	GDP at factor cost	2000
2	Consumption of fixed asset	400
3	Mixed income of self-employee	400
4	Profit	120
5	Rent	160
6	Interest	280

34. From the following calculate the compensation to the employee

Sr. No	Particulars	Rs. In 000`crore
1	Rent and profit	657
2	Consumption of fixed assets	400
3	Intermediate consumption	1240
4	Value of Output	3450
5	NIT	70
6	Interest	450

35. From the following calculate the compensation to the employee

Sr. No	Particulars	Rs. In 000`crore
1	Rent	200
2	Profit	650
3	GDP at factor cost	3500
4	Depreciation	100
5	Mixed income of self-employed	1000
6	Interest	350

36. From the following calculate the compensation to the employee

Sr. No	Particulars	Rs. In 000`crore
1	Rent	140
2	Intermediate consumption	480
3	Profit	100
4	Value of output	2280
5	Consumption of fixed capital	200
6	NIT	240
7	Interest	80
8	Mixed income of self-employed	400

37. From the following calculate the Operating surplus

Sr. No	Particulars	Rs. In 000`crore
1	Compensation to employees	3
2	Depreciation	1
3	NIT	2
4	Gross value added at market price	12
5	Mixed income	1.5

38. From the following calculate the Operating surplus

Sr. No	Particulars	Rs. In 000`crore
1	Compensation to employees	232

2	Depreciation	25
3	Indirect taxes	80
4	Gross value added at market price	845
5	Subsidies	10
6	Intermediate consumption	418

Two approach – Income and expenditure

39. From the following data calculate National Income using (a) income approach (b) Expenditure approach

Sr. No	Particulars	Rs. In 000`crore
1	Compensation to employees	800
2	Private final consumption expenditure	1200
3	Profit	500
4	Rent	200
5	Government final consumption expenditure	800
6	Interest	150
7	NFIA	20
8	NIT	190
9	Mixed income of self- employed	630
10	Net exports	-30
11	Net domestic capital formation	500
12	depreciation	150

40. From the following data calculate National Income using (a) income approach (b) Expenditure approach

Sr. No	Particulars	Rs. In 000`crore
1	Compensation to employees	2400
2	Private final consumption expenditure	3000
3	Profit	1400
4	Rent	400
5	Government final consumption expenditure	2000
6	Interest	540
7	NFIA	60
8	NIT	220
9	Mixed income of self- employed	1200
10	Net exports	-40
11	Net domestic capital formation	1200
12	Gross domestic capital formation	1400

41. From the following data calculate National Income using (a) income approach (b) Expenditure approach

Sr. No	Particulars	Rs. In 000`crore
1	Compensation to employees	600
2	Private final consumption expenditure	1000
3	Profit	400
4	Rent	200
5	Government final consumption expenditure	550
6	Interest	310
7	NFIA	-10
8	NIT	60
9	Mixed income of self- employed	350
10	Net exports	-15
11	Net domestic capital formation	385
12	Gross domestic capital formation	450

42. From the following data calculate National Income using (a) income approach (b) Expenditure approach

Sr. No	Particulars	Rs. In 000`crore
1	Compensation to employees	250
2	Private final consumption expenditure	450
3	Profit	110
4	Rent	45
5	Government final consumption expenditure	200
6	Interest	50
7	NFIA	-5
8	NIT	82.5
9	Mixed income of self- employed	200
10	Net exports	-12.5
11	Net domestic capital formation	100

Application Oriented Questions:

43. In a two-sector economy, the business sector produces 7000 units at an average price of Rs. 5

a) What is the money value of output?
b) What is the money income of households?
c) If household spends 80% of their income, what is the total consumer expenditure?
d) What is the total money revenue received by the business sector?
e) What should happen to the level of output?

44. Assume that an economy's consumption function is specified by the equation C = 500 + 0.80Y.

a) What will be the consumption when disposable income (Y) is Rs. 4,000, Rs. 5,000 and Rs. 6,000?
b) Find saving when disposable income is Rs. 4,000, Rs. 5,000 and Rs. 6,000.
c) What amount of consumption for consumption function C is autonomous?
d) What amount is induced when disposable income is Rs. 4,000, Rs. 5,000 and Rs. 6,000.

45. Find the value of multiplier when a) MPC is 0.2 b) MPC is 0.5 c) MPC is 0.8

46. For the linear consumption function is C = 700 + 0.80Y; I is Rs. 1,200 and Net Exports X-M=100. Find equilibrium output?

47. Given, the consumption function C = 150 + 0.6Y, Where C = Consumption Expenditure, Y = Income and Investment Expenditure = Rs. 2,000. Calculate:

1. Equilibrium level of national income
2. Consumption at equilibrium level of national income.
3. Saving at equilibrium level of national income.

48. Complete the following table:

Income	Saving	Marginal Propensity to consume	Average Propensity to consume
0	(20)		
50	(10)		
100	0		
150	30		
200	60		

49. In an economy income increases by Rs. 10,000 as a result of a rise in Investment Expenditure by Rs. 1,000. Calculate a) Investment Multiplier b) Marginal Propensity to consume.

Solution 1:

Sr. No.	Particulars	Rs. in crore

	Gross value of Output at Market price	16,000
Less	Value of Intermediate consumption	6,000
	Value added at Market price (GDPMP)	10,000
Less	Consumption of Fixed asset	1,300
	NDP MP	8,700
Less	Net Indirect taxes	750
	NDP FC	7,950
Add	NFIA	300
	NNP FC	8,250

Solution 2

Value added by Primary sector = (2000- 600) = 1,400
Value added by Secondary sector = (2500- 900) = 1,600
Value added by Tertiary sector = (3000- 800) = 2,200
Total of three sectors will Give GDP MP = 5200
Add NFIA = -150
Less depreciation = 200
Less Net indirect tax =450
NNP_{FC} =4,400

Solution 3

Value added by Primary sector = (2400- 1200) = 1,200
Value added by Secondary sector = (600- 300) = 300
Value added by Tertiary sector = (900- 150) = 750
Total of three sectors will Give GDP MP = 2,250
Add NFIA (30-60) = = -30
Less depreciation = 240
Less Net indirect tax = (150-60) =90
NNP_{FC} =1,890

Solution 4

Value added by Primary sector = (900-350) = 550
Value added by Secondary sector = (800-320 = 480
Value added by Tertiary sector = (400-100) = 300
Total of three sectors will Give GDP MP = 1,330
Add NFIA = -15
Less depreciation = 80
Less Net indirect tax = 85
NNP_{FC} = 1,150

Solution 5:

Gross value added (GVA MP) = (Sales + change in stock) –Intermediate consumption.
Gross value added (GVA_{MP} A) =(1000+300-200-600+400) = 900
Gross value added (GVA_{MP} B) =(1200-100-400-200) = 500
Gross value added (GVA_{MP} C) =(1300-200-200) = 900
GDP MP = 2,300
Add NFIA = 170
Less Depreciation = 300
NNP FC = 2170

Solution 6 :

GDP_{MP} = (900-275)= 625
NDP_{MP} = GDP_{MP} – Depreciation = 625-75 =550
National Income = NNP_{FC} = NDP_{MP}- Indirect taxes + subsidies +NFIA=550-40+5+(12.5)= 502.5

Solution 7

Value added by Primary sector = (1200- 300) = 900
Value added by Secondary sector = (900- 100) = 800
Value added by Tertiary sector = (700- 200) = 500
Total of three sectors will Give GDP MP = 2,200
Add NFIA = 25
Less depreciation = 30
Less Net indirect tax (75-10) = 65
NNP_{FC} = 2,130
GDP $_{MP}$ = NNP_{FC} +Depreciation+ NIT-NFIA = 2,130+30+65-25= 2,200

Solution8) NI= 8130

Solution 9

Compensation to the employee = Summation of all the above

Solution 10

Compensation to the employee = Summation of all the above except 3
= 10250
Note: since the Employee's contribution to gratuity is already included in the salary and bonus. It shall be ignored.

Solution 11 = 1+2+3+4= 15811
Note Interest free loan is repayable by employee and hence not treated as compensation
Also, reimbursement of travel expense is not a part of salary.

Solution: 12
Add 1+2+3+4+6= 1429
Compensation paid to injured worker by insurance company is not paid by employer to the employee for the service rendered by him and Employees contribution to social security fund is already accounted in salaries. Hence both shall be ignored.

Solution: 13

Items included	**Items excluded**	**Reason to exclude**
Salaries and Wages	Travelling allowance paid towards actual expense	Not a part of salary. Just reimbursement
Commission paid to sales staff	Employee's contribution to Social security	Already included in salary
Employer's contribution to Social security	Interest free loan given to employee	Not a compensation, payable by employee
Rent free accommodation	Old age pension	Transfer payment
LIC premium paid by employer	Income tax of employee	
Employer's contribution to PF		
Free meal coupons to employee		

Solution 14:
Operating surplus = Interest + rent + undistributed profits+ Dividends = 3500+500+1000+800=5800.
Subsidies shall be ignored

Solution 15:
Operating surplus = Interest + rent + undistributed profits+ Dividends+ corporate taxation + royalty= 625+50+375+225+75+50= 1,400

Solution 16) Operating surplus = 850: {exclude 4 and 6}

Solution 17 : Calculation of NDPFC by Income method
NDPFC = Compensation to employees + Mixed income + Operating surplus
= 12000+0+4400= 16400

National Income =NNPFC = NDPFC +NFIA= 16400+220 =16620

WN 1 calculation of Compensation to employees
Compensation to employees = Wages and salaries+ contribution to PF by employer = 10000+2000 = 12000
* contribution to PF by employee shall not be considered as it is already included in salaries and wages

WN 2 Calculation of operating surplus
Calculation of operating surplus= Undistributed profits + Rent+ Interest paid by production units+ Royalty+ Dividends+ Corporate taxation
=200+1000+1300+700+1000+200= 4400
`* interest on national debt is treated as transfer payment and hence shall be ignored

Solution 18 : Calculation of NDPFC by Income method
NDPFC = Compensation to employees + Mixed income + Operating surplus
= 925+0+1000=1925

National Income =NNPFC = NDPFC +NFIA = 1925-25=1900
GDPMP = NDPFC + Depreciation+ NIT = 1925+50+125= 2100

WN 1 calculation of operating surplus:
calculation of operating surplus= Rent+ Interest+ + Profit=200+250+550=1000
Profit is assumed to be PBT

Solution 19 : Calculation of NDPFC by Income method
NDPFC = Compensation to employees + Mixed income + Operating surplus
= 1000+0+1040=2040
National Income= NDPFC + NFIA
= 2040+30

=2070

GDPMP = National income + Depreciation+ NIT- NFIA

=2070+50+60-30

=2150

WN 1 calculation of operating surplus:

calculation of operating surplus= Rent+ Interest+ dividends + undistributed profit+ corporate taxation =150+250+240+290+110=1040

Solution 20: Calculation of NDPFC by Income method

NDPFC = Compensation to employees + Mixed income + Operating surplus

= 1200+200+1800= 3200

National Income = NDPFC + NFIA

= 3200+100

= 3,300

WN 1 calculation of operating surplus:

calculation of operating surplus= Rent+ Interest+ dividends + undistributed profit+ corporate taxation =600+250+150+500+300=1800

Solution 21 : Calculation of NDPFC by Income method

NDPFC = Compensation to employees + Mixed income + Operating surplus

= 3,800+=+1440 = 5240

National Income = NDPFC + NFIA

= 5,240-40

= 5,200

GDPMP = National income – NFIA+ Depreciation+ Indirect taxes – subsidies

= 5200+40+200+1000-200

= 6,240

WN 1 calculation of operating surplus:

calculation of operating surplus= Rent+ Interest+ profit = 400+300+740=1,440

Note 1) Employee contribution to social security scheme is already included in compensation to employees and thus need not be considered again

Solution 22 : Calculation of NDPFC by Income method

NDPFC = Compensation to employees + Mixed income + Operating surplus

= (3800+200) + 0+ 1150= 5,150

National Income = NDPFC + NFIA

= 5,150+(30)

= 5,120

WN 1 calculation of operating surplus:

calculation of operating surplus= Rent+ Interest+ profit

=200+150+800= 1150

Since profit is considered there is no need to consider dividend again

Solution 23:

As per Expenditure method

National income = C + I + G +(X-M) -depreciation +NFIA- NIT

=90+40+(5+25)-3 -2-4-10= 141.

Solution 24:

As per Expenditure method

National income = C + Ig + G +(X-M) -depreciation +NFIA- NIT

=200+$52_{(40+12)}$+100+(4)-12+(2)-(20-4)=318

GDP_{MP} = NNP_{FC} + depreciation -NFIA+NIT

= 318+12-(2)=16

=348

Solution 25:

As per Expenditure method

National income = C + Ig + G +(X-M) -depreciation +NFIA- NIT

=1000+250+300+10-50-10-200= 1300

GNP_{MP} = NNP_{FC} + depreciation +NIT

= 1300 + 50+ 200

=1550

Solution 26:

As per Expenditure method

National income = C + Ig + G +(X-M) -depreciation +NFIA- NIT

=150+ 50+20+(20-40)

=200

Solution 27:

As per Expenditure method

National income = C + Ig + G +(X-M) -depreciation +NFIA- NIT

=35000+(1000+2000+3000+3000)+10000+(2000-1000) -500-500-1000

=53000

GDP_{MP} = NNP_{FC} + depreciation +NIT- NFIA

= 53000+500+1000+500

=55000

Solution 28:

As per Income method GDP_{MP}= Employee compensation (wages and salaries+ employer's contribution to social security scheme) + Profit+ rent+ interest+ Mixed income+ depreciation+ NIT

GDP_{MP}= 6508+34+1060+806+682+1000+800 = 10,890

GNP_{MP}= GDP_{MP} +NFIA = 10,890+40= 10,930

Expenditure method

GDP $_{MP}$ = C + I + G + (X-M)

= 7314+1442+2196+(1346-1408)

= 10,890

GNP_{MP}= GDP_{MP} +NFIA = 10,890+40= 10,930

Solution 29

GDPMP = C + Ig + G + (X-M)

= 2500 + (250+50-15) + 1000 -75 = 3,710

National Income = GDPMP + NFIA -NIT- depreciation

= 3710+25-400-50 = 3,285

Solution 30:

NDP_{MP} = C + In + G + (X-m)

= 1800+210+300-60

=2,250

National Income = NDP_{MP} – NIT + NFIA

= 2,250 -90+30

= 2190

Solution 31:

GNP_{MP} = C + Ig + G + (X-m) + NFIA

= 4000+(1200+200)+1000+(300-400)-100

=6200

National Income = GNP_{MP} – NIT -depreciation

= 6200 -600-200

= 5400

Solution 32:

We know that NDP_{FC} = Employee compensation + operating surplus + Mixed income

GDP_{MP} = NDP_{FC} + depreciation + NIT.

250 = NDP $_{FC}$ +20 +30

NDP_{FC} = 200

Putting it in equation 1

200 = Employee compensation +100+60

Therefore, Employee compensation will be 40

Solution 33:

We know that NDP_{FC} = Employee compensation + operating surplus + Mixed income

GDP_{FC} = NDP_{FC} + depreciation.

2000 = NDP $_{FC}$ +400

NDP_{FC} = 1600

Putting it in equation 1

1600 = Employee compensation + (120+160+280)+400

Therefore, Employee compensation will be 640

Solution 34:

GDP_{MP} = 3450-1240 =2,210

NDP_{FC} = GDP_{MP} – depreciation -NIT

= 2,210-400-70

=1,740

NDP_{FC} = Compensation to employee + Mixed income+ operating surplus

1,740 = compensation to employee +0+ (657+450)

Therefore, compensation to employee= 633

Solution 35:

NDP_{FC} = GDP_{FC} – depreciation

NDP_{FC} = 3500 -100 =3400

NDP_{FC} = Compensation to employee + Mixed income+ operating surplus (Rent + interest+ profit

3400 = Compensation to employees +1000+200+650+350

Compensation to employees = 1200

Solution 36:

NDP_{FC} = GDP_{MP} – depreciation- NIT

NDP_{FC} = (2280-480)-200-240 = 1,360

NDP_{FC} = Compensation to employee + Mixed income+ operating surplus (Rent + interest+ profit

1,360 = Compensation to employees+400+140+100+80

Compensation to employees= 640

Solution 37

NDP_{FC} = GDP_{MP} -depreciation -NIT

NDP_{FC} = Operating surplus + Mixed income + Compensation to employees

From 1 and 2 we get Operating surplus = 4.5

Solution 38

NDP_{FC} = GDP_{MP} -depreciation -NIT (Indirect tax- subsidies)

NDP_{FC} = (845-418) -25 –(80-10)

NDP_{FC} = Operating surplus + Mixed income + Compensation to employees

332 = Operating surplus +0+232

Operating surplus = 100

Solution 39:

Income Method-

National Income = Compensation to employee + Mixed income of self- employed + Operating surplus + NFIA

=800+ (Profit+ rent + interest) 500+200+150+ 630 + 20 = 2,300

Expenditure Method

National Income = C + In + G + (X-M) – NIT + NFIA

=1200+ 500 +800 -30 -190+20 = 2,300

Solution 40:

Income Method-

National Income = Compensation to employee + Mixed income of self- employed + Operating surplus + NFIA

=2400+ (Profit+ rent + interest) 1,400+400+540+ 1200 + 60 = 6,000

Expenditure Method

National Income = C + In + G + (X-M) – NIT + NFIA

= 3,000+ 1200+ 2,000 -40-220+60 =6000

Solution 41:

Income Method-

National Income = Compensation to employee + Mixed income of self- employed + Operating surplus + NFIA

=600+ (Profit+ rent + interest) (400+200+310)+ 350 -10= 1,850

Expenditure Method

National Income = C + In + G + (X-M) – NIT + NFIA

= 1,000+385+550-15-60-10 =1,850

Solution 42:

Income Method-

National Income = Compensation to employee + Mixed income of self- employed + Operating surplus + NFIA

=250+ (Profit+ rent + interest) (110+45+50) + 200 -5= 650

Expenditure Method
National Income = C + In + G + (X-M) – NIT + NFIA
= 450 + 100 + 200 - 12.5 - 82.5 - 5 =650

Solution 43 :

a) The money value of output equals total output times the average price per unit. The money value of output is (7,000 * 5) = Rs. 35,000.
b) In a two-sector economy, households receive an amount equal to the money value of output. Therefore, money income of households is the same as the money value of output. i.e. Rs. 35,000.
c) Total spending by households (Rs. 35,000 * 0.8) i.e. Rs. 28,000
d) The total money revenues received by the business sector is equal to aggregate spending by households i.e. Rs. 28,000
e) The business sector makes payments of Rs. 35,000 to produce output, whereas the households purchase only output worth Rs. 28,000 of what is produced. Therefore, the business sector has unsold inventories valued at Rs. 7,000. They should be expected to decrease output.

Solution 44 :

a) Consumption for each level of disposable income is found by substituting the specified disposable income level into the consumption equation. Thus, for Y = Rs. 4,000, C = Rs. 500 + 0.80(Rs. 4,000) = Rs. 500 + Rs. 3,200 = Rs. 3,700
   Likewise, C is Rs. 4,500 when Y = Rs. 5,000 and Rs. 5,300 when Y = Rs. 6,000
b) Saving is the difference between disposable income and consumption. It is the difference between consumption line and the 45 line at each level of disposable income. Using the calculation from part a) above, we find that saving Rs. 300 when Y is Rs. 4,000: Rs. 500 when Y is Rs. 5,000 and Rs. 700 when Y is Rs. 6,000
c) Autonomous consumption is the amount consumed when disposable income is zero; autonomous consumption is Rs. 500 i.e the consumption expenditure when the consumption line C intersects the vertical axis and disposable income is 0. Since autonomous consumption is unrelated to income, autonomous consumption is Rs. 500 for all levels of income.
d) Induced consumption is the amount of consumption that depends upon the level of income. Consumption is Rs. 3,700 when disposable income is Rs. 4,000. Since, Rs. 500 is autonomous (i.e consumed regardless of the income level) Rs. 3,200 out of the Rs. 3,700 level of consumption is induced by disposable income. Similarly, induced consumption is Rs. 4,000 when disposable income is Rs. 5,000 and Rs. 4,800 when disposable income is Rs. 6,000`

Solution 45 : The value of multiplier (k) is found by relating the change in output (ΔY) to the initial change in aggregate spending. The value of the multiplier is directly related to the level of MPC i.ethe greater the MPC, the larger the value of the multiplier. The value of the multiplier is found from the equation k = 1/ (1-MPC).

a) Thus, when MPC is 0.2, the multiplier is 1.25
b) When MPC is 0.5, the multiplier is 2
c) When MPC = 0.80, the multiplier is 5

Solution 46 : The equilibrium level of output can be found by equating output and aggregate spending i.e by solving Y = C + I + X-M for Y

Y = C + I + X-M
Y = 700 + 0.8Y + 1200 + 100
Y-0.8Y= 700 + 1200 + 100
0.2Y = 2000
Y = 2000/ 0.2
= 10,000

Solution 47:

C = 150 + 0.6Y
C = 150 + 0.6 (2000)
= 150 + 1200
= 1350

Unit 1- Market Failure

Q 1: Describe why governments should perform the allocation function in an economy? Or, Explain the term Market Failure.

Answer: Market failure is a situation in which the free market leads to **misallocation of society's scarce resources** in the sense that there is either **overproduction** or **underproduction** of particular goods and services leading to a less than optimal outcome. The reason for market failure lies in the fact that though perfectly competitive markets work efficiently, most often the prerequisites of competition are unlikely to be present in an economy. Market failures are situations in which a particular market, left to itself, is inefficient.

Q 2: Describe the different sources of market failure.

The four major reasons of market failure are:

a) Market power
b) Externalities
c) Public goods
d) Incomplete information.

Q 3: How does monopoly power affect efficiency of markets?

Answer : Imperfect competition and presence of monopoly power in different degrees leading to **under-production**, **higher prices** than would exist under conditions of competition and sometimes **total elimination** of particular product from the market. These distort the choices available to consumers and reduce their welfare.

Q 4: Explain why environmental pollution is regarded as a source of market failure.

Answer: Pollution is an instance of market failure because there is ***no market in which these external costs can be reflected in the price of goods produced***. That is the firm has to pay no extra cost for creating pollution & thus these cost are not considered while determining equilibrium price & hence equilibrium price is less than the efficient price.

Q 5: Distinguish between positive and negative externalities.

Answer :

Sn	Positive externalities	Negative externalities
1.	Positive externalities occur when the action of one party confers benefits on another party.	Negative externalities occur when the action of one party imposes costs on another party.
2.	Positive production externality, less commonly seen, initiated in production that confers external benefits on others.	Negative externality is common & initiated in production which imposes an external cost on others.
3.	Positive externality is socially desirable	Negative externality is socially un-desirable

Q 6: Why externalities are considered as a source of market failure?

Answer: The unique feature of an externality is that it is ***initiated and experienced not through the operation of the price system, but outside the market***. Or in other words, in case of negative externalities, the firm has to pay no extra cost for creating externalities, thus these costs are not considered while determining equilibrium price & hence equilibrium price is less than the efficient price leading to market failure.

Q 7: Why do economists use the word external to describe third-party effects that are harmful or beneficial?

Answer: As the ***originator of the externality imposes costs or benefits on others who are not responsible for initiating the effect***, therefore, Externalities are also referred to as 'spillover effects', 'neighborhood effects' 'third-party effects' or 'side-effects',

Q 8: What do you understand by externalities in consumption?

Answer: An Externality occurs, when a Consumption or Production Activity has an indirect effect on other's consumption or Production activities and such effect are not reflected directly in Market Prices. There are two types of consumption externalities:

a) Positive production externalities: A positive production externality initiated in production

that confers external benefits on others may be received in production or in consumption.

b) **Negative consumption externalities:** Negative Consumption Externalities are extensively experienced by us in our day to day life. Such negative consumption externalities initiated in consumption which produce external costs on others may be received in consumption or in production.

Q 9: What is the consequence of a negative externality on price and output?
Answer: Negative externalities impose ***costs on society*** that extent ***beyond the cost of production*** as originally projected by the producer. Due to negligence of negative externalities, marginal private cost is lower than marginal social cost thus there are high chances of over production and under-pricing.

Q 10: How does the presence of positive externality influence price and output?
Answer: Positive externalities will reduce the cost and consequently price; it will shift the supply curve to the right and increase its output. A higher output that would equate marginal social benefit and marginal social cost is socially optimal.

Q 11: Describe why markets have incentives to produce private goods?
Answer: Competitive markets have sufficient incentives to produce and supply private goods. Because of the peculiar characteristics of public goods such as ***indivisibility***, ***non-excludability and non rivalry***, competitive private markets will fail to generate economically efficient outputs of public goods. That's why public goods are often (though not always) under-provided in a free market economy.

Q 12: Why do markets fail to produce public goods? Illustrate your answer. Or, Why do private producers hesitate to produce public parks, bridges and highways?
Answer:
1) A unique feature of public goods is that they do not conform to the settings of market exchange (Money for services). The owners of such products cannot exercise sufficient control over their property. For example, if you maintain a beautiful garden, you cannot exercise full control over it so as to charge your neighbors for the enjoyment which they get from your garden.
2) Though public goods are extremely valuable for the well-being of the society, left to the market, they will not be produced at all or will be grossly under produced because they do not have any incentive to produce goods, like profit.
3) Another Major issue with this problem of free-riding

Q 13: Explain the main characteristics of private goods.
Answer 13: The main characteristics of private goods are as follows:
1. **Property Right:** Owners of private goods can exercise private property rights and can prevent others from using the good or consuming their benefits.
2. **Rivalrous:** Consumption of private goods is 'rivalrous' that is the purchase and consumption of a private good by one individual prevents another individual from consuming it
3. **Excludable:** Private goods are 'excludable' i.e. it is possible to exclude or prevent consumers who have not paid for them from consuming them or having access to them.
4. **No Free riding problem:**. This means that the private goods will be available to only those persons who are willing to pay for it.
5. **Rejectable:** All private goods and services can be rejected by the consumers if their needs, preferences or budgets change.
6. **Additional resource costs** are involved for producing and supplying additional quantities of private goods

Q 14: Explain free rider problem. Give examples.
Answer: The ***incentive to let other people pay for a good or service***, the benefits of which are enjoyed by an individual is known as the free rider problem. In other words, free riding is '***benefiting from the actions of others without paying***'. For example, in case of public goods like bus, a free rider is a consumer who does not have to pay for ticket in the expectation that others will pay.

Q 15: Identify pure public good using criteria for identification.

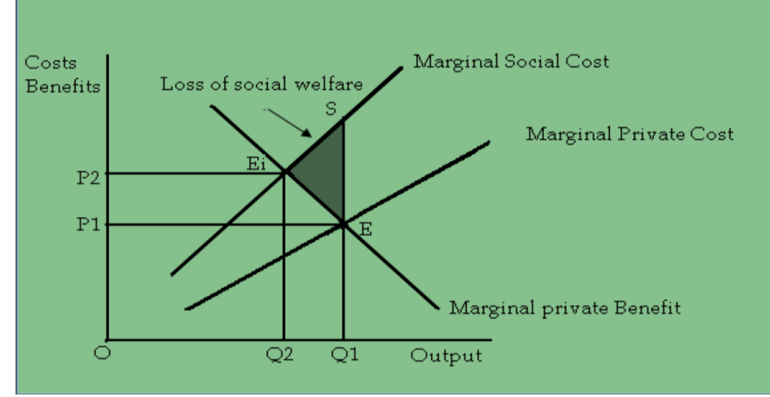
Answer: Pure public good is often criticized by many who point out that such goods are not in fact observable in the real world. They argue that goods which perfectly satisfy ***non rivalness and non-excludability*** are not easy to come across. For example, if the government provides law and order or medical care, the use of law courts or medical care by some individuals subtracts the consumption of others if they need to wait. As another example, we may take defense. If armies are mostly deployed in the northern borders, it may not result in the same amount of protection to people in the south.

Q 16: Explain the different types of externalities?

Answer: The four possible types of externalities are:

a. Negative production externalities
b. Positive production externalities
c. Negative consumption externalities and
d. Positive consumption externalities

Q 17: Explain using diagram and examples, the concepts of negative externalities of production and consumption, and the welfare loss associated with the production or consumption of a good or service.



Answer: Since externalities are not reflected in market prices, they can be a source of economic inefficiency. Production remains efficient only when all benefits and costs are paid for. Negative externalities ***impose cost on society*** that extends beyond cost of production as originally intended by the producer. Without government intervention, such a producer will have no reason to consider social costs of pollution. When firms do not have to worry about negative externalities associated with their production, the result is excess production and unnecessary social costs. The problem, though serious does not usually float up much because:

a) the society does not know precisely who are the producers of harmful externalities
b) Even if the society knows it, the cause-effect linkages are so unclear that the negative externality cannot be unquestionably traced to its producer.

The problem can be explained with the help of following diagram:

The equilibrium level of output that would be produced by a free market is Q1 at which private benefit (MPB) is equal to marginal private cost (MPC). Marginal Social Cost represents the full or true cost to the society of producing another unit of a good. It includes Marginal Private Cost (MPC) and Marginal Social Cost (MSC). Assuming that there are no externalities arising from consumption, we can see that marginal social cost (Q1S) is higher than marginal private cost (Q1E). Social efficiency occurs at Q2 level of output where MSC is equal to MSB. Output Q1 is socially inefficient because at Q1, the MSC is greater than the MSB and represents over production. The shaded triangle represents the area of dead weight welfare loss. It indicates the area of overconsumption. Thus, we conclude that when there is negative externality, a competitive market will produce too much output relative to the social optimum.

Q 18: Describe the term 'Tragedy of Commons'

Answer: Economists use the term 'tragedy of the commons' to describe the problem which occurs when ***rivalrous but non excludable goods are overused***, to the disadvantage of the entire world. e.g. Earth's atmosphere.

Q 19: Why health and education not pure public goods?

Answer: Health and Education possess nearly all the qualities of private goods and some benefits of public goods. It is easy to keep people away from them by charging the price or fee. However, it is undesirable to keep people away from such goods because the society would be better off if more people consume them.

Q 20: Explain the term quasi-public goods.

Answer: The quasi-public goods or services, also called a ***near public good***, possess nearly all of the ***qualities of the private goods*** and some of the ***benefits of public good*** (For e.g.: education, health services). It is easy to keep people away from them by charging a price or fee. However, it is undesirable to keep people away from such goods because the society would be better off if more people consume them.

Q 21: Public goods do not use up extra resources as additional people consume them. Why?

Answer: A Public Good is defined as on which ***all individuals enjoy in common*** in the sense that each individual's consumption of such good leads to ***no subtraction from any other individual's consumption*** of that good. It is also referred to as a collective consumption good or a social good. Once a public good is provided, the additional resource cost of another person consuming the goods is ***'zero'.*** A good example is a lighthouse near a sea shore to guide the ships. Once the inspiration is start burning, an additional ship can use it without any additional cost of provision.

Q 22: How social cost can be differentiated from private cost?

Answer:

SN	Private cost	Social cost
1	It is the cost faced by the producer or consumer directly involved in the transaction.	It refers to the total cost to the society on account of production and consumption activity.
2	Cost incurred and recognized by producer/ consumer directly.	Private cost + external cost borne by third parties not directly.
3	When negative production externalities exist private costs is less than social cost.	When negative production externalities exist social cost is greater than private cost.

Q 23: What criteria are used to distinguish between pure and impure public goods?

Answer 23:

SN	Pure Public Goods	Impure Public goods
1.	A pure public good is ***non-rivalrous and non-excludable.***	Impure public goods are partially rivalrous or congestible.
2.	Since the goods are non-excludible, there is ***no price mechanism*** for it.	Since the goods are excludable, the market can provide a price mechanism for it.
3.	Provider of goods is not able to control the degree of ***congestion.***	Provider of goods may be able to control the degree of congestion, by regulating the number of people who may use it, or the frequency with which it may be used or both.

Q 24: Distinguish between different types of public goods. How do public goods cause market failure?

Answer:

The different types of public goods are as follows-

i. **A pure public good** is non rivalrous and non-excludable in nature that's why market fails to produce it.

ii. **The quasi public goods** or services, also called a **near public good** which possess nearly all qualities of private goods and some of the benefits of public good.

iii. **Global public goods** are goods whose ***impacts are indivisible spread throughout the entire globe***. The benefits of these goods accrue to everyone in the world. The distinctive characteristics of global public goods are that there is no mechanism either market or government to ensure an efficient outcome.

iv. **Common access resources or common pool resources**- Economists use the term 'tragedy of the commons' to describe the problem which occurs when ***rivalrous but non excludable goods are overused***, to the disadvantage of the entire world. e.g. Earth's atmosphere.

Q25 : What are the implications of exclusion from the use of an impure public goods?

1) **Eliminates Free Riding:** Since free riding can be eliminated, the impure public good may be provided either by the market or by the government at a price or fee. If the consumption of a good can be excluded, then, the market would provide a price mechanism for it. (nominal fee for park)
2) **Control of degree of congestion:** The provider of an impure public good may be able to control the degree of congestion either by regulating the number of people who may use it, or the frequency with which it may be used or both. (taking cable connection to enjoy free Doordarshan channel)

Q 26: Describe the free rider problem associated with public goods using suitable example. What would be the outcome?

Answer: Consumers can take advantage of public goods without contributing sufficiently to their production. The ***incentive to let other people pay for a good or service***, the benefits of which are enjoyed by an individual is known as the free rider problem. In other words, free riding is '***benefiting from the actions of others without paying'***. For example, in case of public goods like bus, a free rider is a consumer who does not have to pay for ticket in the expectation that others will pay.

As such if the free rider problem cannot be solved, the following two outcomes are possible:

1. No public good will be provided in private markets.
2. Private markets will seriously under produce public goods even though these goods provide valuable service to the society.

Q 27: Define common resources. Why are they overused?

Answer:

1. Common access resources or common pool resources are a special class of impure public goods which are non- excludable as people cannot be excluded from using them. These are rival in nature and their consumption reduces the benefits available for others. This rival nature of common resources is what distinguishes them from pure public goods, which exhibit both non-excludability and non-rivalry in consumption. They are generally available free of charge.
2. Since price mechanism does not apply to common resources, producers and consumers do not pay for these resources and therefore, they overuse them and cause their depletion and degradation. This creates threat to sustainability of these resources.
3. Examples of common access resources are fisheries, common grasslands, rivers, sea, backwaters biodiversity etc.

Q 28: Appraise the role of incomplete information in generating market failure.

Answer: Information failure is common in numerous market exchanges. When this happens misallocation of scare resources takes place and equilibrium price and quantity is not established through price mechanism. Due to the following reasons the real markets are not fully satisfied.

a) **Complex nature**: Often, the nature of products and services tends to be highly complex. E.g. Cardiac surgery, financial products (such as pension fund products, mutual funds etc)
b) **Information not available quickly and cheaply:** In many cases consumers are unable to quickly or cheaply find sufficient information on the best prices as well as quality for different products.
c) **Ignorant Buyer/seller:** People are ignorant or not aware of many matters in the market. Generally, they have inaccurate or incomplete data and consequently make potentially 'wrong' choices or decisions.

Unit 2- Government Intervention

Q 29: What are the types of Government interventions? Or, How do governments ensure that market power does not create distortions in the market?

Answer: Government interference can be-

1. **Direct** as a buyer or supplier of public goods / information
2. **Indirectly** in the form of subsidies / taxes and regulation / influence to correct distortion in the market which occurs when there are deviations from the ideal perfectly competitive state.

Q 30: Describe direct government interventions to solve negative externalities.
Answer: Direct controls ***prohibit*** specific activities that explicitly create negative externalities or require that the negative externality be limited to a certain level.
For instance, limiting emissions. Government may pass laws to improve the effects of negative externalities or fix emissions standard which is a legal limit on how much pollution a firm can release. It may charge an emissions fee which is levied on each unit of a firm's emissions.

Q 31: How do Governments ensure that market power does not create distortions in the market?
Answer: Government interference can be Direct as a buyer or supplier of public goods / information & indirectly in the form of subsidies / taxes and regulation / influence to correct distortion in the market which occurs when there are deviations from the ideal perfectly competitive state.

Q 32. What are relative advantages of market-based interventions?
Answer: The relative advantages of market-based interventions are as follows:
a. **Lesser costs:** They rely on economic interventions to achieve environmental goals at lesser costs.
b. **Market price for pollution:** the market-based approaches focus on generation of a market price for pollution (Cap & Trade system).

Q 33: What are the different options for providing merit goods to the public?
Answer: Merit goods can be provided through the market, but they are likely to be **under-produced and under-consumed** through market mechanism so that social welfare will not be maximized.
Government intervention can be in the form of ***direct provision, regulation, licensing and controls.*** When governments provide merit goods, it may give rise to large economies of scale and productive efficiency apart from generating substantial positive externalities and overcoming the problems. When merit goods are directly provided free of cost by government, there will be substantial demand for the same.

Q 34: What are the consequences if demerit goods are left to free market?
Answer: The production and consumption of demerit goods are likely to be ***more than optimal*** under free markets. The price that consumers pay for a packet of cigarettes is market determined and does not account for the social costs that arise due to externalities. Therefore, the ***marginal social cost will exceed the market price*** and ***overproduction and over-consumption*** will occur, ***causing misallocation of society's scarce resources***.

Q 35: Explain with aid of examples, the main characteristics of merit goods.
Answer: The main characteristics of merit goods are:
1) Rivalrous in nature
2) Excludable
3) Limited in supply
4) Reject able by those unwilling to pay
5) Involve positive marginal cost for supplying to extra users.

Merit goods are Examples of merit goods include health services, education, public libraries and museums.

Q 36. Explain why governments impose taxes on goods and services?
Answer: The size of tax depends on the amount of product a firm produces. Tax increases private cost of production or consumption as the case may be and would decrease the quantity demanded and therefore output of the good which creates negative externality. That's why governments impose taxes on goods and services.
Also, it is a very important source of revenue for government and that is later spent for welfare cause. This system is totally variable and increases with increase in production.

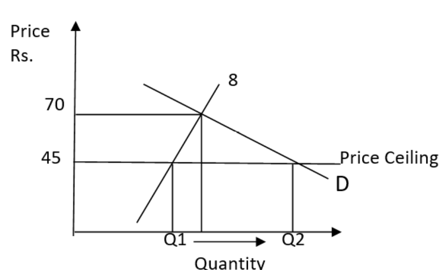
Q37. Explain why governments impose pollution taxes on goods and services?
Answer: The size of tax depends on the amount of pollution a firm produces. ***Tax increases***

private cost of production or consumption as the case may be and would ***decrease the quantity demanded*** and therefore output of the good which creates negative externality. That's why governments impose taxes on goods and services.

Q 38: Explain why governments impose price ceilings
Answer: When prices of certain essential commodities rise extremely, government may resort to controls in the form of price ceilings for making a resource or commodity ***available to all at reasonable prices.***

Q 39: How do you justify food price controls and rent controls?
Answer: Food price controls are set by government to ensure steady and assured income to farmers. Rent controls are imposed to give relief to tenant from landlord as they are changing very high rent to them.

Q40. Illustrate the example of price ceiling on market outcomes.
Answer: A price ceiling which is set below the prevailing market clearing price will generate excess demand over supply. In the given following diagram, the price ceiling of Rs. 45 which is below the market determined price of Rs. 70 leads to generation of excess demand over supply equal to Q1-Q2.



Q 41: Explain why governments impose price floors?
Answer: Price floor means the lowest price fixed by the government for a product. The government fixes floor price for farm products. This regulates income of farmers.

Q 42: Why do Governments fix minimum wages?
Answer: Fixation of minimum wages is a price floor which is the lowest legal price that should be paid in a labour market. It is based on the normative view that someone is working full time should be able to afford a basic standard of living.

Q 43. Describe the concept of price floors with examples. OR Explain the rationale for price support for agricultural products.
A: In India, in the case of many crops the government has initiated the Minimum Support Price (MSP) program as well as procurement by government agencies at the set support prices. The objective is to guarantee steady and assured incomes to farmers. In case the market price falls below the minimum Support Price, then the guaranteed MSP will prevail.

For example: if the demand & supply in the market for food grain fix the price at Rs. 3/- per kg for onions, government may impose price floor as Rs. 8 per kg to guarantee steady and assured income to farmers for producing onions. Nevertheless, mere announcement of higher support prices for commodities which are not effectively backed up by gaining arrangement, does not serve the purpose of compensation levels of prices or producers.

Q44. Explain the effectiveness of regulatory mechanisms for mitigating market failure?
Answer: The effectiveness of regulatory mechanisms for mitigating market failure is as follows:

a. **Market power:** a regulatory authority determines an acceptable price for an item, based on its costs and fair rate of return. (Eg. For natural monopolies like electricity, gas, water)
b. **Externalities:** Governments by regulating the actions of those involved in generating externalities, by total prohibition and setting limits for negative externalities etc.
c. **Merit goods:** Through regulations, government can-
  i. Determine how a private activity may be conducted- eg. 10+2 pattern of education, board exams.
  ii. Prohibit some type of goods and activities- eg. Narcotic substances and smuggling.
  iii. Set standards and issue orders making other oblige- eg. Use of helmets, insurance coverage.
  iv. Enhances the quality of merit goods- i.e consumption of what is socially desirable.

v. Ensure the quality of merit goods supplied to the society.

d. Demrit goods: Regulations as to sale government imposes regulations to limit access to demerit goods, to vulnerable groups like children and youngsters eg. Censor board's certification. Time & space restrictions may be regulatory controls as Space (Eg. Smoking in public places, sale of tobacco to be away from schools) and time is at the particular times during the day when sale is banned.

e. Information failure: Regulations making it mandatory to have accurate labeling and contain disclosure by producers.

Q 45. Do you think Government intervention in markets will help enhance social welfare?

Answer: The existence of a free market does not altogether eliminate the need for government and that government intervention is essential for the efficient functioning of markets. Intervention mechanisms which governments adopt ensures greater welfare to the society and the probable outcomes of such market interventions. Government plays a vital role in creating the basic framework within which fair and open competitive markets can exist. It is essential that government establishes the 'rule of law' and in this process, creates and protects property rights, ensures that contracts are upheld and sets up necessary institutions for proper functioning of markets. For achieving this, an appropriately framed competition and consumer law framework that regulates the activities of firms and individuals in their market exchanges should be in place.

Q 46. Why do you think it is necessary for government to manipulate the price and output of commodities and services? What consequences do you foresee in the absence of government intervention?

Answer: Price and output manipulation is intentional that causes market price to separate from their competitive level. The key idea of manipulation is distort prices where distortion prices cause inefficient allocation of resources which is proper focus of government policy.

Price controls are put in place by governments to influence the outcomes of a market. There is a strong political demand for governments to intervene in markets for various goods and services on grounds of fairness and equity. Price interventions may take the form of either a price floor (a minimum price buyer are required to pay) or a price ceiling (a maximum price sellers are allowed to charge for a good or service). Fixing of minimum wages and rent controls are examples of such market intervention. Government usually intervenes in many primary markets which are subject to extreme as well as irregular fluctuations in price.

Q 47. What is the rationale behind the argument that public goods should be provided by government?

Answer: The non-rival nature of consumption provides a strong argument for the government rather than the market to provide and pay for public goods. In case of such pure public goods where entry fees cannot be charged, direct provision by governments through the use of general government tax revenues is the only option.

Excludable public goods can be provided by government and the same can be financed through entry fees. A very regularly followed method is to grant licenses to private firms to build a public good facility. Under this method, the goods are provided to public on payment of an entry fee. Now the government regulates the level of the entry fee chargeable from public and keeps strict watch on the functioning of the licensee to guarantee equitable distribution of welfare.

Also because of reason of National security and danger involved in certain sector.

Q 48: What is the objective of government subsidy?

Answer: Subsidy means creating wedge between consumer price and producer cost, which will lead to changes in Demand or supply decisions. The objectives of government subsidies are:

1) Inducing higher consumption or production
2) Offsetting the market imperfections which will include suppression of externalities
3) The achievement of social policy objectives which will induce redistribution of income, population control, etc.

Q 49: Define demerit good and point out its characteristics.

Answer: Demerit goods are goods which impose significant negative externalities on the society as a whole and are believed to be socially undesirable.

The characteristics of demerit goods are as follows:

a. The consumption of demerit goods imposes ***significant negative externalities*** on the society as a whole. Therefore, the ***private costs are less than the social costs*** experienced by the society.
b. The production and consumption of demerit goods are likely to be ***more than optimal under free markets.***

Q 50: Account for the difficulties in determination of level of taxes to solve the problems associated with market failure?
Answer: Taxes are difficult to determine and administer due to difficulty to discover the right level of taxation, problems associated with inelastic nature of demand for the good and the problem of possible capital flight.

Q51: Explain the market based methods for solving the problems of negative externalities?
Environmental Tax/ Pollution Tax/ Pigouvian Tax

a) These taxes are named after economist A.C Pigou who argued that an Externality cannot be alleviated by contractual negotiation between the affected parties and so taxation should be resorted to,
b) This is based on the concept of make the polluters pay.
c) Thus, the External (Social) Costs are converted into Internal (Private) Costs of the product or activity
d) This tax increases the Private Cost of production / consumption and would decrease the quantity demanded and therefore the output of the good.

Setting Limits for Negative externalities
Marketable Licenses (called permits) to emit limited quantities of pollutants can be bought at a specified price from the Regulatory Agency, by Polluters
b) Each Firm has permits specifying the number of units of emissions that the firm is allowed to generate
c) These permits are transferable. So, different pollution levels are possible across the regulated entities.
d) A high polluter has to either- i) pay monetary penalties, or ii) buy more permits both leading to increase in costs and decrease in profits.
e) A low polluter can- i) avoid Monetary Penalties, and ii) sell permits and earn revenue, both making such firm profitable.

Unit 3- Government Functions

Q 52: Enumerate the circumstances which necessitate redistribution by government.
Answer:
1. **Equitable distribution**- Redistribution of income to achieve an equitable distribution of societal output among households.
2. **Well-being** of those members of the society who suffer from deprivations of different types
3. Providing **equality** in income, wealth and opportunities
4. Providing security for people who have **hardships,** and
5. Ensuring that everyone enjoys a **minimal standard of living.**

Q 53: Illustrate with example the redistribution effect of a tax and transfer policy.
Answer 5: A major function of present day governments involves changing the pattern of distribution of income from what the market would offer to a more egalitarian (believing in equality of income) one. The examples are:
1. **Progressive taxation:** Taxation policies of the government whereby progressive taxation of the rich is combined with provision of subsidy to the poor household.
2. **Proceeds from progressive taxes** used for financing public services, especially those that benefit low-income households (example, supply of essential food grains at highly subsidized prices to BPL households).

Q 54. What is objective of government subsidies?
Answer: Subsidy means creating wedge between consumer price and producer cost, which will

lead to changes in Demand or supply decisions. The objectives of government subsidies are:

1. Inducing **higher consumption** or production
2. **Offsetting the market imperfections** which will include suppression of externalities
3. The **achievement of social policy objectives** which will induce redistribution of income, population control, etc.
4. Examples are: a forestation, re plantation, protection of water bodies, and treatment of sewage and cleaning of toxic (deadly) waste sites.

Q55. What should be the public revenue and expenditure policy of the government during recession?

Answer: During recession **government increase expenditure** or **cut down taxes** or adopt a combination of both so that the aggregate demand is boosted up with money put into hands of the people to generate more demand and revive out of recession.

Q 56. How can government get domestic producer produce more of a certain goods, say pulse? (Hint- direct production, provision of incentive and disincentive, regulation and discretionary policies)

Answer: A variety of allocation instrument is available with government by which government can influence resource allocation in an economy such as direct production, provision of incentive and disincentive, regulation and discretionary policies, etc. thus government may direct domestic producers to produce pulses or provide incentives to produce.

Q57. What reason would you assign for employment reservations to socially backward communities? Or *What reason would you assign for employment reservations to socially backward communities?*

Answer: the fixed percentage of Government and public sector jobs are made exclusive for backward castes and tribes. The reason for advancing the **well-being** of those members of society who suffers from **deprivation** of different stages

Q 58. What would be the objective of a government when it declares special schemes for backward regions?

Answer: balanced regional development for providing infrastructure, job-opportunity, employment, etc.

Q 59: Describe the rationale for stabilization function of government policy.

Answer 11: The stabilization function is one of the key functions of fiscal policy and aims at **eliminating macroeconomic fluctuations** arising from suboptimal allocation. Business cycles are natural phenomena in any economy and they tend to occur periodically. The market system has **inherent tendencies to create business cycles**.

The market mechanism is **limited in its capacity to prevent or to resolve the disruptions** caused by the fluctuations in economic activity. In the absence of appropriate corrective intervention by the government, the instabilities that occur in the economy in the form of recessions, inflation etc. may be **prolonged for longer periods** causing enormous hardships to people especially the poorer sections of society. It is also possible that a situation of **stagflation** (a state of affairs in which inflation and unemployment exist side by side) may set in and make the problem more intricate.

Q 60: Explain the role of government in market economy.

Answer 64: Richard Musgrave, in his classic treatise ***"The Theory of Public Finance" (1959)*** introduced the three-branch taxonomy of the role of Government functions in a Market Economy. Musgrave believed that, for conceptual purposes, the functions of government are to be separated into three, namely-

Allocation Function (Efficiency Focus) - Aims to correct the sources of inefficiency in the Economic System

Distribution Function (fairness focus) - Ensures that the Distribution of Wealth and Income is fair and equitable.

Stabilization Function (Maintenance and Welfare Focus) - Covers Monetary and Fiscal Policy, ensuring Macro-economic stability, Maintenance of High Levels of Employment and Price

Stability etc.

Q 61: Explain how automatic stabilization brings in stability in an economy.
Answer: Automatic Stabilization brings stability through ***automatic adjustments in government expenditures and taxes without any deliberate governmental action,*** i.e. by limiting the increase in disposable income during an expansionary phase and limiting decrease in disposable income during the contraction phase of the business cycle.

Q 62: Explain how automatic stabilizers combat (fight) demand pull inflationary pressures?
Answer: When an economy expands, **employment increases** with progressive system of taxes, people have to pay **higher taxes** as their income rises. This leaves them with **lower disposable** income and thus causes a **decline in their consumption** and therefore aggregate demand. Similarly, **corporate profits** tend to be **higher** during an expansionary phase attracting **higher corporate tax payments.** With higher income taxes, firms are left with **lower surplus** causing a **decline in their consumption** and investments and thus in aggregate demand. The built-in stabilizers automatically remove spending from an economy to reduce the demand-pull inflationary pressures and further expansionary stimulation.

Q 63: Illustrate four cases which provide justification for government intervention in markets.
Answer 65: The cases of the redistribution function or market intervention for social-economic reasons performed by governments are:
1. **Progressive taxation and subsidy:** Taxation policies of the government whereby progressive taxation of the rich is combined with provision of subsidy to the poor household.
2. **Financing public services-** especially those that benefit low-income households (example, supply of essential food grains at highly subsidized prices to BPL households).
3. **Employment reservations** and preferences to protect certain segments of the population,
4. **Special schemes** for backward regions and for the vulnerable sections of the population.

Q 64: What are different instruments available to the government to improve allocation efficiency in an economy? [MT- FOR DIP]
Answer 67:
i. **Direct Production:** government may directly produce the economic good (for example, electricity and public transportation services)
ii. **Influence allocation through incentives and disincentives:** government may influence private allocation through incentives and disincentives (for example, tax concessions and subsidies may be given for the production of goods.
iii. **Influence allocation through policies:** government may influence allocation through its competition policies, merger policies etc.
iv. **Regulatory:** governments' regulatory activities such as licensing, controls, minimum wages, and directives on location of industry influence resource allocation
v. **Framework:** government sets legal and administrative frameworks, and
vi. **Others:** any of a mixture of intermediate techniques may be adopted by governments

Unit – 4 Fiscal Policy- [GSTB DEO]

Q 68: Define Fiscal Policy.
Answer: Fiscal policy involves the use of ***government spending, taxation and borrowing*** to influence both pattern of economic activity and level of growth of aggregate ***demand, output and employment.***

Q 69: What are the objectives of Fiscal Policy?
Answer 49: The most common objectives of fiscal policy vary from country to country. They are as follows:
a. Achievement and maintenance of full employment,
b. Acceleration of the rate of economic growth and
c. Maintenance of price stability, development and
d. Equitable distribution of income and wealth

Q 70: Distinguish between discretionary and non-discretionary fiscal policy.
Answer:

SN	Discretionary fiscal policy	Non- Discretionary fiscal policy
1.	Discretionary fiscal policy refers to deliberate policy actions on the part of the government to change the levels of expenditure and taxes to influence the level of national output, employment, and prices.	Non- discretionary fiscal policy or automatic stabilizers are part of the structure of the economy and are 'built-in' fiscal mechanism that operates automatically to reduce the expansions and contractions of the business cycle.
2.	It occurs when there is unemployment or inflation problem.	It occurs when there is changes in economic conditions cause government expenditures and taxes automatically.
3.	Example: specific export subsidies. Controlling inflation and recession by borrowing and spending of government.	Example: personal income tax, corporate income tax, and transfer payment.

Q 71: What are the symptoms of the beginning of a recession? [Hint- Declining GDP- Growing unemployment- declining price- lower aggregate demand]
Answer: A recession sets in with a period of declining real income, as measured by real GDP and a situation of rising unemployment. At the beginning of a recession, incomes are reduced leading to lower tax payments. Government expenditure increases due to increased transfer payments. These together provide proportionally more disposable income available for consumption spending to household.

Q 72: Explain the term 'recessionary gap.'
Answer: A recessionary gap also known as a contractionary gap is said to exist if the existing levels of ***aggregate production are less than what would be provided with full employment of resources***. It represents the difference between the actual aggregate demand and the aggregate demand which is required to establish the equilibrium at full employment level of income

Q 73: What should be tax policy during recession and depression?
Answer: Tax policy during recession & depression is:
a) **Lower personal taxes** leads to higher disposable income with people, including higher consumption.
b) **Low corporate taxes** increase the views of profits for business and promote further investment.
c) Thus, tax rates are lowered, in order to encourage private expenditure on consumption and investment.

Q 74: What is the consequence of excessive taxation will have on business?
Answer: Excessive taxation usually congests (chokes) new investments with less growth and having less potential profits. Therefore the government has to be cautious about a policy of tax increase.

Q 75: Distinguish between Pump priming and the 'compensatory spending'.
Answer:
1. Pump Priming' assumes that when ***private spending becomes incomplete***, certain volumes of public spending will help to recover the economy.
2. Compensatory spending is said to be resorted to when government spending is carried out with the ***obvious intention to compensate for the deficiency*** in private investment.

Q 76: Describe the term expansionary fiscal policy.
Answer 58: Expansionary fiscal policy is designed to **stimulate** the economy during contractionary phase of a business cycle and is accomplished by increasing aggregate expenditures and aggregate demand through an increase in all type of government spending and/ or a decrease in taxes.

Q 77: What is meant by Crowding Out?

Answer: Crowding out effect is the ***negative effect fiscal policy*** when spending by government in an economy replaces private spending is known as crowding out effect. When money from private sector is 'crowded out' to the public sector then there will be decline in private spending and thus fiscal policy will become ineffective.

Q 78: Explain the use of fiscal policy for economic growth.
Answer: *Government provision of public goods such as education, research and development etc. provide momentum for long run economic growth. A well designed tax policy that rewards innovation and entrepreneurship without discouraging incentives will help to grow the economy. Fiscal policy also aims to attain long run economic growth through policies to stimulate aggregate supply. Fiscal policy is a chief instrument available for governments to influence income distribution and play a significant role in reducing inequality and achieving equity and social justice.*

Q 79: Explain how economic stability can be achieved through fiscal policy.
Answer: Fiscal policy involves use of government spending, taxation, and borrowing to influence both the pattern of economic activity and level of growth of aggregate demand, output and employment. Expansionary fiscal policy is adopted to improve recession and contractionary fiscal policy is resorted to for controlling high inflation. The nature of budget whether it is surplus or deficit also has an important implication on a country's economic activity. While deficit budgets are expected to stimulate economic activity, surplus budget are thought to slow down economic activity.

Q 80: Point out the limitations of fiscal policy.
Answer: Timing Problem:
1. Discretionary fiscal policy may create more problems due to time delays (i.e lags) which include-
   a) Recognition Lag- Delay in recognizing the economy's problems
   b) Decision Lag- Delay in evaluating the possible alternative policies
   c) Implementation Lag- Delay in evaluating the possible alternative policies
   d) Impact Lag- outcomes of a policy are not visible for some time.
2. There are **possible conflicts** between different objectives of fiscal policy such that a policy designed to achieve one goal may adversely affect another. For example, an expansionary fiscal policy may worsen inflation in an economy
3. **Negative effect of Deficit financing**: Deficit financing increases the purchasing power of people. The production of goods and services, especially in under developed countries may not catch up simultaneously to meet the increased demand. This will result in prices spiraling beyond control.
4. **"Crowding Out" Effect:** If Governments compete with the private sector to borrow money for spending, this may cause interest rates to go up. Firms' willingness to invest may be reduced. Individuals too may be reluctant to borrow and spend and the desired increase in Aggregate demand may not be realized.

Q 81: What types of fiscal policy measures are useful for redistribution of income in an economy?
Answer: Fiscal policy is used as an effective tool for redistribution function. These are measure through:
a. A Progressive direct tax system ensures that those who have greater ability to pay contribute more towards defraying the expenses of government and that the tax burden is distributed fairly among the population.
b. Indirect taxes can be differential: for example, the commodities which are primarily consumed by the richer income group, such as luxuries are taxed heavily and the commodities the expenditure on which form a larger proportion of the income of the lower income group, such as necessities are taxed light.

Q 82: What are the measures undertaken in a contractionary fiscal policy?
Answer: Contractionary fiscal policy is aimed at eliminating inflationary gaps and to trim down the aggregate demand by decrease in government spending and an increase in personal income taxes and/or business taxes causing less disposable incomes and lower incentives to

invest.

Q 83: Under what circumstances do governments pursue expansionary fiscal policy? What are the instruments for expansionary fiscal policy?

Answer: The circumstances under which governments pursue expansionary fiscal policy are:
a) Decline in overall economic activity.
b) Decline in real income (real GDP)
c) Higher rate of unemployment
d) Fall in aggregate demand (i.e. demand-deficient recessions)
e) Production of low quantity of goods and services.

Q 84: Define the term 'recessionary gap'. What would be the appropriate fiscal policy measures to eliminate recessionary gap? Or,

Answer: A recessionary gap is also known as a contractionary gap, is said to exist if the existing levels of aggregate production is less than what would be produced with full employment of resources. Recessionary gap are measure through expansionary fiscal policy to address gap between:
a) It is a measure of output that is lost when actual national income falls short of potential income.
b) Aggregate demand is not sufficient to create condition of full employment.
c) It arises if the existing level of aggregate production is less than what would be produced with full employment of resources.

Q 85: Explain the term contractionary fiscal policy. What are limitations in pursuing a contractionary fiscal policy?

Answer 85: Contractionary fiscal policy refers to the deliberate policy of government applied to restrict aggregate demand and consequently the level of economic activity. In other words, it is fiscal policy aimed at eliminating an inflationary gap. This is achieved by adopting policy measures that would result in the aggregate demand curve (AD) shift to the left so the equilibrium may be established at the full employment level of real GDP.

The limitation of contractionary fiscal policy:
a) **Demand Decreases:-** With decrease in government spending, the total amount of money available in the economy is reduced which in turn trim down the aggregate demand.
b) **Fall in investment and disposable income:-** An increase in personal income taxes reduces disposable incomes leading to fall in consumption spending and aggregate demand. An increase in taxes on business profits reduces fresh investments.

Unit 5- Application oriented Questions

1. Elucidate the nature of economic function performed by the government in the following cases:
a) The government initiates a massive programme for eradication of mosquito-borne diseases in coastal areas.
b) The government fixes the prices of 377 essential medicines listed in the National List of Essential Medicine, 2015.

Solution:
a) (i) Action programme taken by govt. is **Public Merit good** since it **yields positive externalities** .However there is inefficient market outcomes resulting into possible **market failure**. Adam Smith proposed that govt. shall intervene for establishment and maintenance of highly beneficial public institutions and public works which the market may fail to produce on account of lack of sufficient profits. This is the resource allocation role of government's policy to improve economic performance through its expenditure to provide an optimum mix of various social goods.
(ii) Government initiates a massive programme for eradication of mosquito-borne diseases in coastal areas. Also there is possibility of government failure.

b) (i) The distributive function of budget related to the basic Question of for whom an economy should produce goods and services. Left to the market, only private benefits

and private costs would be reflected in the price paid by consumers. This means, through the market mechanism, people would consume inadequate quantities compared to what is socially desirable. Outcome: social welfare will not be maximised. Therefore- Government intervention in the case of Merit goods eg. Health care- government deems that its consumption should be encouraged- Price intervention – setting price ceilings- to influence the outcomes of a market on grounds of fairness and equity – price floor for ensuring minimum price and price ceiling for making a resource or commodity available to all at reasonable prices – May illustrate with diagram.

(ii) The government fixes the prices of 377 essential medicines listed in the National List of Essential Medicine, 2015. However, negative outcomes are also Possible such as disincentives to producers, diversion of resources away from regulated products, black marketing- etc.

2. The government decides to levy up to Rs. 20,500 per flight from private airlines on major routes in order to fund an ambitious regional connectivity scheme which seeks to connect small cities by air and to make flying more affordable for the masses. Critically examine the implications of this policy on the airlines market.

Solution:

(i) Price intervention by govt. is a market based policy. The contributing airlines may experience cost escalation due to policy of govt. which will result into fare hikes and thus changes in equilibrium quantities. Airlines may feel disincentives to fly aircrafts in taxed routes eventually leading to exit from market by low profit margin airlines. Regional connectivity and other welfare outcomes as subsidies to producers would lower their cost of production increase output yielding substantial positive externalities.

(ii) Another possibility: government intervention in the economy to correct market failure creates inefficiency and leads to misallocation of scarce resources. Social welfare will not be maximised rather disincentives to existing players.

(iii) Hence it cannot be sure that the government interventions would be effective.

3. The pharmaceutical industry is involved in innovation, development, production and marketing of medicines in India. Ensuring the availability of lifesaving drugs at reasonable prices is the duty of the government. The National Pharmaceutical Pricing Authority (NPPA) is the watchdog in India, which controls the price of drugs. Government has to consider the interest of both the producers and buyers.

Qs:

i. Elucidate the market outcomes if matters relating to drugs are entirely left to the pharmaceutical industry.

ii. Appraise the need for government action in the above case. Do you consider government action necessary in the case of medicines? Why?

iii. What are the different policy options available to government to meet its public health objectives?

Solution:

(i) Essential commodity – Left to market there may be inefficiency and possible market power – likely to charge higher prices than competitive prices – price controls are put in place by governments to influence the outcomes of a market – policy options for limiting market power also include price regulation in the form of setting maximum prices that firms can charge- In some cases, the government's regulatory agency determines an acceptable rate of return- setting price-caps based on the firm's variable costs, past prices, and possible inflation and productivity growth regulation price, so as to ensure a competitive or fair rate of return. Legislation, regulation in terms of price controls, care to be taken not to damage the incentives of producers. Illustrate with figures.

(ii) Merit good- merit goods are rival, excludable, limited in supply, rejectable by those unwilling to pay, and involve positive marginal cost for supplying to extra users. Positive externalities-left to the market, only private benefits and private costs would be reflected in the price paid by consumers. This means, compared to what is socially desirable, people would consume inadequate quantities.

(iii) Merit goods can be provided through the market, but are likely to be under produced and under-consumed through the market mechanism so that social welfare will not be maximised- This is strong case for government intervention. Government intervention in the form of direct provision, regulation, licensing and controls. Illustrate with figure:

Market outcome for merit goods.

4. The Commission for Agricultural Costs and Prices (CACP) advises the government on minimum support prices of 23 agricultural commodities which comprise 7 cereals, 5 pulses, 7 oilseeds, and 4 commercial crops.

i. What is the underlying principle of minimum support prices? Do you think MSP is a form of market intervention? Why?

ii. Why do you consider free markets undesirable for the above mentioned agricultural commodities?

Solution:

(i) Influence the outcomes of a market on grounds of fairness and equity-strong political demand for government intervention- Price intervention for ensuring stable prices and stable incomes to producers- market-based incentives to ensure steady output, outcomes of higher than equilibrium price. Illustrate with figures.

(ii) Markets for primary products are subject to extreme as well as unpredictable fluctuations in price- income elasticity of demand for primary products is less than one- need to guarantee steady and assured incomes to farmers- Minimum Support Price (MSP) programme as well as procurement by government agencies at the set support prices- Illustrate with figure; Market outcome of minimum support price- When price floors are set above market clearing price, suppliers are encouraged to over-supply and there would be an excess of supply over demand- limitations- possible government failure.

5. The government of country X, an underdeveloped country, having a severe problem of unemployment of labour embarks on a massive development programme. It has recognized the imminent need for boosting up investments to take country to a higher than average growth trajectory. The following stes were taken by the government:

i. Invited tenders for a huge network of highways, solar energy generation, communication systems and computerized systems.

ii. Large number of schools throughout the country

iii. Research grants for universities and private research institutes

iv. Announced a number of of free health care programmes for all

v. All citizens assured of social security

vi. Increase in payments under existing social security schemes

vii. Tax exemption limit raised for individuals, instituted progressive taxes with high marginal rates- increased corporate taxes

Very soon prices started spiraling and there was general unrest among people especially the poor.

i. Analyze each of the above measures from a fiscal policy perspective

ii. Why did overall prices increase?

iii. What policies do you suggest to solve problem of price rise?

iv. What are the limitations?

Solution:

(i) Fiscal policy aimed at economic growth and desired redistribution of income- this is done through spending programmes targeted on welfare measures for disadvantaged for eg: poverty alleviation programmes, free or subsidized amenities to improve quality of living of poor, infrastructure provision on selective basis, strengthening of human capital for enhancing employability, Government provision of public goods such as education, research and development etc. provide momentum long run economic growth- A well designed tax policy that rewards innovation and entrepreneurship, without discouraging incentives will promote private businesses who wish to invest and thereby help the economy grow – A progressive direct tax system ensures that those who gretare ability to pay contribute more towards defraying the expenses of government and that the tax burden is distributed fairly among the population – carefully planned policy of public expenditure helps in redistributing income from the rich to the poorer sections of the society-

(ii) Conflict with stabilization functions of state policy- Government expenditure injects more money into the economy and stimulates demand in each case, disposable income increase- aggregate demand increases- illustrate with shift in AD curve- No corresponding increase in output- inflation sets in.

(iii) Remedy through fiscal policy- reduce aggregate demand- contractionary fiscal policy- increase aggregate supply- illustrate using figure

(iv) Conflict of objectives- possible lags- long gestation periods- politically unviable to reduce expenditure- high taxes lead to disincentives to invest.

6. In the above example, suppose that the increase in government spending has been Rs. 5 billion. Assume that the marginal propensity to consume of people is equal to 0.6

i) What will be government spending multiplier.

ii) What impact would a Rs. 5 billion increase in government expenditure have on equilibrium GDP?

Solution:

i. The government spending multiplier when the MPC is 0.6 is 1/ 1-MPC = 2.5

ii. A Rs. 5 billion increase in government expenditure will change the GDP by Rs. 12.5 billion if the MPC = 0.6

7. Identify the market outcomes for each of the following situations:

a. A few youngsters play loud music at night. Neighbours may not be able to sleep.
b. Ram buys a large SUV which is very heavy.
c. X smokes in a public place.
d. Rural school students given vaccination against measles
e. Traffic congestion making travel very uncomfortable.
f. Piracy of computer programs.
g. Some species of fish are now getting extinct because they have benn caught indiscriminately.
h. The municipality provides sirens four times a day
i. Burglar alarms are installed by many in your locality
j. Global warming increases due to emissions of fossil fuels.

Solution:

a. Negative externality, overproduction
b. Negative externality, environmental externality, wear and tear of roads, increased fuel consumption, added insecurity imposed on others
c. Negative externality, overproduction.
d. Public good, positive externality
e. Negative externality
f. Unpatented computer programs have characteristics very much like a public good and therefore market failure.
g. The problems of commons – the tragedy of commons
h. Sirens have all characteristics of public goods. People will free – ride market failure.
i. Positive externality, free riding.
j. Negative Externality.

8. The draft of New Education Policy, 2016 proposes hey changes in government's policy towards education. Explain the rationale for government action to streamline the education system in the country.

Solution: Merit good (Refer hints to Q 1 above) Illustrate with figure: Market outcome for merit goods.

Unit 1: Money- Basics, Characteristics and Functions

Question 1: Define Money.
Answer 1: Money refers to assets which are commonly used and accepted as a means of payment or as a medium of exchange or medium of transferring purchasing power. Money it totally liquid and has generalized purchasing power and is generally acceptable in settlement of all transactions and in discharge of other kinds of business obligations including future payments.

Question 2: What is meant by term "legal tender".
Answer 2: Legal tender, which means that they serve by law as means of payment recognized by a legal system to be valid for meeting a financial obligation.

Question 3: Write notes on the function of money as a medium of exchange.
Answer 3: Money has generalized purchasing power and is generally acceptable in settlement of all transactions and in discharge of other kinds of business obligations including future payments. Anything that would act as a medium of exchange is not necessarily money. For instance, a bill of exchange may also be a medium of exchange, but it is not money since it is not generally accepted as a means of payment.

Question 4: Outline how money is useful as a 'common denominator of value'.
Answer 4: Money is clearly defined as unit of value or unit of account. The monetary unit is the unit of measurement in terms of which the value of all goods and services is measured and expressed.. It is convenient to measure the prices of all commodities in terms of a single unit, rather than record the relative price of every good in terms of every other good.

Question 5: Examine the relationship between purchasing power of money and general price level.
Answer 5: There is an inverse relationship between purchasing power of money and general price level. The main determinant of the general price level or the value of money is the quantity of money. If there is change in the general level of commodity prices or changes in the value or purchasing power of money are determined first and measured by the consumer price index.

Question 6: Critically examine money's function as standard of deferred payment.
Answer 6: Money facilitates recording of deferred promises to pay. Money is the unit in terms of which future payments are contracted or stated. However, variations in the purchasing power of money due to inflation or deflation reduce the efficiency of money in this function.

Question 7: List the general characteristics that money should possess.
Answer 7: Following are the important characteristics of Money-

1. Generally Acceptable
2. Durable or Long-lasting
3. Effortlessly Recognizable.
4. Difficult to Counterfeit i.e. Not easily reproducible by people
5. Relatively Scarce, but has elasticity of supply
6. Portable or easily transported
7. Possessing Uniformity; and
8. Divisible into smaller parts in usable quantities or fractions without losing value.

Question 8: Explain the functions performed by Money?

Answer:

- **Money is a convenient medium of Exchange** or it is an instrument that facilitates easy exchange of goods and services.
- **Satisfaction of Wants:** Money, though not having any inherent power to directly satisfy human wants, by acting as a medium of exchange.

- **Better than barter:** By decomposing the single barter transaction into **two separate transactions of sale and purchase**, money eliminates the need for **double coincidence of wants.**
- **Common Measure of value:** Money serves as common measure of Value or Common Denominator of Value. it is convenient to measure the prices of all commodities in terms of a single unit, rather than record the relative price of every good in terms of every other good. It reduces the number of exchange ratios between goods and services
- **Comparability:** Goods and services which are otherwise not comparable are made comparable through expressing the worth of each in terms of money.
- **Deferred payments:** Money serves as a unit or standard of deferred payment i.e money facilitates recording of deferred promises to pay. Money is the unit in terms of which future payments are contracted or stated.

Unit 2: Money- Demand

Question 9: Explain the concept of demand for money.
Answer: Demand for money is actually demand for **liquidity and demand to store value**. Demand for Money is a decision about how much of one's given Stock of Wealth should be held in the form of Money rather than as other Assets like Bonds. Although it gives little or no Return, Individuals, Households & Firms hold money because it is liquid and offers the most convenient way to accomplish their day to day transactions.

Question 10: Why do we say that money demand is derived demand?
Answer: The demand for money is derived demand. It is demanded for its purchasing power. Basically people demand money because they wish to command over real goods and services with the use of money.

Question 11: Why is it important to study about demand for money?
Answer: Demand for money has an important role in the determination of interest, prices and income in an economy.

Question 12: Explain how higher interest rate affects the demand for money?
Answer: Higher the interest rate, higher would be opportunity cost of holding cash and lower the demand for money. Innovations such as internet banking, application based transfers and automatic teller machines reduce the need for holding liquid money.

Question 13: Describe the main postulates of quantity theory of money.
Answer: The **total supply of money** in the community consists of the quantity of actual money (M) and its velocity of circulation (V). i.e., MV + M'V'. (V and V' remains constant). T is a function of national income. Since full employment prevails, the volume of transactions T is fixed in the short run. The total volume of transactions (T) multiplied by the price level (P) represents the demand for money. The demand for money (PT) is equal to the supply of money (MV + M'V)'. The total value of transactions made is equal to PT and the value of money flow is equal to MV + M'V'. Therefore, MV + M'V' = PT, where M' = the total quantity of credit money and V' = Velocity of circulation of credit money.

Question 14: Describe Keynesian view of different motives of holding cash.
Answer: According to Keynes, people hold money (M) in cash for three motives:
(i) Transactions motive,
(ii) Precautionary motive, and
(iii) Speculative motive.

Question 15: Compare transaction demand for money according to Keynes & Baumol & Tobin.
Answer: According to Keynes transaction demand for money is interest inelastic while as per Baumol and Tobins approach the demand for money is Interest elastic

Question 16: Describe the various theories related to demand for money. (question on each theory will be asked separately)

Answer:

1. **Quantity Theory of Money:** There is strong relationship between money and price level. So, Quantity of Money is the main determinant of the Price Level or Value of Money. So, changes in General Level of Commodity prices / Value/ Purchasing power of Money are determined by changes in the Quantity of Money in Circulation.

2. **Cash Balance Approach - Neo-classical Approach or Cambridge Approach:**

In early 1900s, Cambridge economists Alfred Marshall, A.C. Pigou, D.H Robertson, etc. put forward a fundamentally different approach to QTM called Cash Balance / Cambridge Approach. The Cambridge version holds that money increases utility in the following two ways:

- **i.** Enabling the possibility of split up of sale and purchase to two different points of time rather than being simultaneous, and
- **ii.** Being a hedge against uncertainty. Since the sale and purchase of commodity does not place simultaneously, they need temporary abode of purchasing power, as a hedge against uncertainty. As such demand for money also involves a precautionary motive in Cambridge approach. Since money gives utility in its store of wealth and precautionary modes, one can say that money is demanded for itself.

3. **Liquidity Preference Theory - Keynesian Theory:** Keynes theory of demand for money is known as 'Liquidity Preference Theory'. It denotes people's desire to hold money rather than securities and long term interest bearing investments. The sum of the transaction and precautionary demand, and the speculative demand, is the total demand for money. An increase in income increases the transaction and precautionary demand for money and a rise in the rate of interest decreases the demand for speculative demand money.

4. **Post Keynesian Theories – Inventory Approach; or Define 'real cash balance'**

Baumol and Tobin developed a deterministic theory of transaction demand for money, known as ***Inventory Theoretic Approach***, in which money or 'real cash balance' was essentially viewed as an inventory held for transaction purposes. Real cash balance is the inventory held for the transaction purposes. Inventory models assume that there are two media for storing value: ***money and an interest-bearing alternative financial asset.*** There is a fixed cost of making transfers between money and alternative assets e.g. broker charges. While relatively liquid financial assets other than money (such as bank deposits) offer always a positive return. The higher the income, the higher is the average level or inventory of money holdings. The level of inventory holding also depends upon the carrying cost, which is the interest foregone by holding money and not bonds, net of the cost of individuals of making a transfer between money and bonds (i.e. brokerage fee). The individual will choose the number of times the transfer between money and bonds takes place in such a way that the net profits from bond transactions are maximized. The average transaction balance (money) holding is a function of the number of times the transfer between money and bonds takes place. The more the number of times the bond transaction is made, the lesser will be the average transaction balance holdings.

5. **Post Keynesian Theories – Friedman Theory:** Friedman identifies the following four determinants of the demand for money. The nominal demand for money:

i. Is a function of total wealth, which is represented by permanent income divided by the discount rate, defined as the average return on the five asset classes in the monetarist theory world, namely money, bonds, equity, physical capital and human capital.

ii. Is positively related to the price level, P. If the price level rises the demand for money increases and vice-versa.

iii. Rises the opportunity costs of money holdings (i.e. returns on bonds and stock) decline and vice versa.

iv. Is influenced by inflation, a positive inflation rate reduces the real value of money balances, thereby increasing the opportunity costs of money holdings.

6. Post Keynesian Theories- Risk Theory: Tobin analyzed that the Risk – Avoiding behavior of Individuals provided the foundation for the Liquidity Preference, and for a negative relationship between the Demand for Money and the Interest Rate. The risk aversion theory of based on the principles of portfolio management. An individual's optimal portfolio structure is determined by:

i. The risk/reward characteristics of different assets
ii. The taste of the individual in maximizing his utility consistent with the existing opportunities.

In this theory which analyses the individual's portfolio allocation between money and bond holdings, the demand for money is considered as a store of wealth. Tobin assumed that an individual would hold a portion of his wealth in the form of money in the portfolio because the rate of return on holding money was more certain than the rate of return on holding interest earning assets and entails no capital gains or losses.

Question 17: List out the factors that determine the demand for money in the Baumol-Tobin analysis or transactions demand for money? How does a change in each factor affect the quantity of money demanded?

OR

Examine the influence of different variables on demand for money according to Inventory Theoretic Approach?

Solution: Baumol and Tobin developed a deterministic theory of transaction demand for money, known as Inventory Theoretic Approach, in which money or 'real cash balance' was essentially viewed as an inventory held for transaction purposes. The factors that determine the demand for money in the Baumol-Tobin analysis of transactions demand for money:

1. An individual combines his asset portfolio of cash and bond in such proportions that his cost is minimised.
2. An individual will choose the number if transfers between money and bonds, so as to maximise the net profit form bond transactions and minimise overall cost.
3. Holding is a function of number of times the transfer between money and bonds takes place (i.e transfers)
4. Higher the number of transfers, lesser will be the Average Transaction Balance Holdings, Choice of number of transfers is made, which determines the split between Money & Bond Holdings.
5. Transfer Cost of Transaction Cost refers to the Fixed Cost per transfer, eg. Brokerage, Bank Charges etc. An increase in the transaction cost raises the Marginal Cost of Bond Transactions and consequently lowers the number if such transactions. So, it raises the transactions demand for money and lowers the Average Bond Holding over the period.

Question 18: Explain why bond prices move inversely to market interest rates.

Answer: The market value of bonds and the market rate of interest are inversely related. A rise in the market rate of interest leads to a decrease in the market value of the bond, and vice versa. Investors have a relatively fixed conception of the **'normal' or 'critical' interest rate R_C** and compare the **current rate of interest R_N** with such 'normal' or 'critical' rate of interest. If wealth-holders consider that the current rate of interest is high compared to the 'normal or critical rate of interest, they expect a fall in the interest (rise in bond prices). At the high current rate of interest, they will convert their cash balances into bonds because:

a) They can earn high rate of return on bonds,
b) They expect capital gains resulting from a rise in bond prices consequent upon an

expected fall in the market rate of interest in future.

Conversely, if the wealth holders consider the current interest rates as low, compared to the normal or critical rate of interest i.e. if they expect the rate of interest to rise in future (fall in bond prices) they would have an incentive to hold their wealth in the form of liquid cash rather than bonds because:

a) Loss suffered by way of Interest foregone is small.
b) Anticipated capital losses (fall in prices) is avoided.
c) Return on Money balances will be greater than the return on alternative assets.
d) If the interest rate does increase in future, the bond prices will fall and the idle cash balances held can be used to buy bonds at lower price and can thereby make a capital gain.

Unit 3: Money- Supply

Question 17: Explain the nature of currency issue under minimum reserve system.
Answer: The Central Bank is empowered to issue Currency to any extent by keeping only a certain minimum reserve of Gold & Foreign Securities.

Question 18: Define 'credit money'.
Answer: Banks create money supply in the process of borrowing and lending transactions with the public. Money so created by the commercial banks is called 'credit money'. The total supply of money in the economy is also determined by the extent of credit created by the commercial banks in the country.

Question 19: List the components of M1.
Answer: The components of M1 are currency notes and coins with the people plus demand deposits of banks (current and saving deposit accounts) plus other deposits of RBI.

Question 20: Distinguish between M1 and M2.
Answer:

Sr. No.	M1	M2
1.	M1 includes currency notes and coins with the people + demand deposits of banks (CASA) plus other deposits with the RBI.	M2 includes all the components of M1 and savings deposits with post office savings banks.
2.	M1 is narrow concept of money supply.	M2 is broader concept of money supply as compared to M1.

Question 21: What is the rationale behind inclusion of net demand deposits of banks in money supply measurement?
Answer: The net demand deposits of banks and not their total demand deposits that gets included in the measurement of money supply. Money is deemed as something held by the 'public'. Since inert-bank deposits are not held by the public, they are netted out of the total demand deposits to arrive at net demand deposits.

Question 22: Define 'Reserve Money'.
Answer: Reserve money is comprised of the Currency in circulation, Bankers' deposits with RBI and other deposits with RBI.

Question 23: Write a note on two major components of Reserve Money?
Answer: The two major components of Reserve Money are currency in circulation and reserves. Currency in circulation comprises currency with the public and cash in hand with banks. Reserves are bank deposits with the central bank.

Question 24: Write a note on the liquidity aggregates compiled by RBI.
Answer: The central bank also measures macroeconomic liquidity by formulating various 'liquidity' aggregates in addition to the monetary aggregates. The liquidity aggregates compiled by RBI are: L1 = NM3 + All deposits with the post office savings banks (excluding

National Savings Certificates). L2 = L1 + Term deposits with term lending institutions and refinancing institutions (FIs) + Term borrowing by FIs + Certificates of deposits issued by FIs. L3 = L2 + Public deposits if non-banking financial companies.

Question 25: Define 'money multiplier'.
Answer: Money multiplier m is defined as ratio that relates change in money supply to the given change in monetary base. It denotes by how much money supply will change with change in monetary base.

Question 26: What is the nature of relationship between money multiplier and the money supply?
Answer: So Money Multiplier Approach recognizes the relationship of Money Supply as **M = m * MB,** Where M = Money Supply, m = Money Multiplier Ratio, and MB= Monetary Base (or) High Powered Money. The higher the MB, higher the Money Supply (M). The lower the Ratios (RDR & CDR), higher the 'm' and hence higher the Money Supply (M). From the above equation, **Money Multiplier (m) = Money Supply/ Monetary Base** It denotes by how much the money supply will change for a given change in high-powered money.

Question 27: What would be the effect on money multiplier if banks hold excess reserves?
Answer: The additional units of high-powered money that goes into 'excess reserves' of the commercial banks do not lead to any additional loans, and therefore, these excess reserves do not lead to creation of money. Thus, if the Central Bank injects money into banking system, there will be no effect on deposits or currency and hence no effect on money multiplier & money supply.

Question 28: What effect does government expenditure have on money supply?
Answer: When the Reserve Bank of India lends to the government under ways and means advances (WMA)/ overdraft facility (OD), it results in the generation of excess reserves (i.e. excess balances of commercial banks with the Reserve Bank). This happens because When Government incurs expenditure; it involves debiting Government balances with RBI, and Crediting the Receiver (e.g. Salary Account of Employee) Account with the Commercial Bank. The Excess reserves thus created can potentially lead to an increase in Money supply through the Money Multiplier process.

Question 29: Define credit multiplier. How is it calculated?
Answer 29: It describes the amount of **Additional Money** created by **Commercial Bank** through the process of lending available Money; it has in excess of the Reserve Requirement. This measure tells us how much new money will be created by the banking system for a given increase in the high-powered money. It reflects a bank's ability to increase the money supply. It is also called "Deposit Multiplier" or "Deposit Expansion Multiplier". The credit multiplier is the reciprocal of the Required Reserve Ratio. If reserve ratio is 10%, then credit multiplier = 1/0.10 = 10

Question 30: How do changes in issue of currency affects money supply.
Answer: The behaviour of Central Bank which controls issue of currency is reflected in the supply of the nominal high powered money. If the behaviour of the public and commercial banks remains unchanged over time, the total supply of nominal money in the economy will vary directly with the supply of the nominal high-powered money issued by the Central Bank.

Question 31: How do changes in actual reserve ratio affect the excess reserves, money multiplier and money supply?
Answer: The commercial banking system as a whole, the actual reserves ratio is greater than the required reserve ratio. Since the banks keep with them a higher than the statutory required percentage of their deposits in the form of cash reserves. The additional unit of high powered money that goes into excess reserves of the commercial banks do not lead to any additional loans. And therefore, these excess reserves do not lead to creation of money.

Question 32: If the Central Bank injects more money would that be always affecting

the money supply?
Answer: if the central bank injects money into the banking system and these are held as excess reserves by the banking system, there will be no effect on deposits or currency and hence no effect on money supply.

Question 33: Distinguish between Classical and Cambridge version of quantity theory of money.
Answer:

S.No.	Classical Version of Quantity Theory of Money	Cambridge version of quantity theory of money
1.	Propounded by Irving Fishing.	Propounded by Alfred Marshall, A.C Pigou, D.H Robertson and John Maynard Keynes.
2.	In this theory there is strong relationship between money and price level. So, quantity of money is the main determinant of the price level or the value of money.	There is no such relationship between money and price level. So, quantity if money is not main determinant of the price level or the value of money.
3.	Demand for money = price level(P) * Total volume of transaction(T) = Supply of money (MV + M'V')	Demand for money= proportion of income that people want to be hold cash (k) * Income (PY).

Question 34: Define Money supply. Describe the different components of money supply.
Answer: "Money supply" denotes the Total Quantity of Money available to the people in the economy. The Quantity of money at any point of time is a measurable concept. Supply of money is a stock concept.
In India RBI has formulates various Aggregates for measurement of Money Supply, as under.
Since 1967-68 RBI has been publishing data on four alternative measures of money supply Denoted by M1, M2, M3 and M4. These are known as **Monetary Aggregates**.
The following table will explain what is included in Monetary Aggregates

Item	Computation
M1 – Narrow Money	Currency notes and coins with the Public + Net Demand Deposits of Banks (CASA Deposits) + Other Deposits of RBI. (Other than those held by government) Note: Net Demand Deposits = Total Demand Deposits **Less** Inter – Bank Deposits **(Also refer note below)**
M2	MI + Savings Deposits with Post Office Savings Banks.
M3- Broad Money	MI + Net time Deposits with the Banking System.
M4	M3 + Total deposits with Post Office Savings banks (excluding National Savings Certificates)

Different aggregates represent different level of Liquidity. M1 being most liquid and M4 being least liquid.

Question 35: Describe the different determinants of money supply in a country.
Answer: Three factor as immediate determinants of money supply are-
(a) Monetary Base or High – Powered Money – Money Multiplier
(b) ratio of reserves to deposits – Credit Multiplier and
(c) ratio of currency to deposit

Question 36: Describe the different approaches of money supply in a country.
Answer : The alternative approaches in respect of determination of money supply are as under-

1. **Central Bank Behavior:** as per this approach, money supply is determined exogenously by the central bank.
2. **People Behavior:** Money supply is determined endogenously (originating within) by changes in economic activities which affect people's desire to hold currency relative to deposits, rate of interest etc.
3. **Combined behavior:** the determinants of money supply are based on 'money multiplier approach' which focuses on the relation between the money stock and money supply in terms of monetary base or high powered money. This approach holds that total supply of nominal money in the economy is determined by the joint behavior of the central bank, the commercial banks and the public.

Question 37: How changes in high powered money, required reserves, excess reserves and currency ratio, influence money supply in an economy?
Answer

Factors	Formula/ Symbol	Relation	Description
a) **Stock of High-Powered Money**	H	Direct	• H (High-powered money) represents the behaviour of the **Central Bank.** • Its control over the Issue of Currency is reflected in the supply of Nominal High-Powered Money. • With all other variables unchanged, Total Supply of Nominal Money will vary directly with the Supply of Nominal High – Powered Money.
b) **Ratio of Reserves to Deposits (RDR)**	RDR = $\frac{R}{D}$	Inverse	• RDR (Reserves to Deposits Ratio) represents the behaviour of the **Commercial Banks,** in determining Money Supply through "Credit Money". • The behaviour of the Commercial Banks is reflected in the Ratio of their Cash Reserves to Deposits, known as the "Reserve Ratio" (RDR). • This implies that if the required ratio on Demand deposits increases, more reserves will be needed (Other factors remaining constant). And Vice-versa
c) **Ratio of Currency to Deposits (CDR)**	CDR = $\frac{C}{D}$	Inverse	• CDR (Currency to deposits Ratio) represents the behaviour of the **General Public**, in determining Money Supply. It represents the behaviour of public to hold money in for of cash. • They influence the Nominal Demand Deposits of the Commercial Banks by their decisions in respect of the amount of Nominal Currency in hand (Money holding as Cash) designated as "Currency Ratio" (CDR). • Higher the CDR lower will be the money available with bank to create credit money and vice-versa.

These Variables are designated as the **'proximate determinants'** of the Nominal Money Supply in the Economy.

Question 38: Define the concept of money multiplier and bring out its impact on money supply.

Answer: Money multiplier m is defined as ratio that relates change in money supply to the given change in monetary base. It denotes by how much money supply will change with change in monetary base

M = m * MB

Where M = Money Supply,

m = Money Multiplier Ratio, and

MB = Monetary Base (or) High Powered Money.

With all other variables unchanged, Total Supply of Nominal Money will vary directly with the Supply of Nominal High – Powered Money.

Unit 4: Monetary policy

Question 39: Define Monetary Policy.

Answer: Monetary Policy refers to the use of Monetary Policy Instruments which are at the disposal of the Central Bank, to regulate the availability, cost and use of Money & Credit, to promote economic growth, to ensure Price Stability, to achieve optimum levels of output and employment, to obtain Balance of Payments equilibrium, to ensure stable currency, or to meet any other goal of Government's Economic Policy.

Question 40: Describe the objectives of Monetary Policy.

Answer: There are multiple objectives to pursue such as moderate long term interest rates, exchange rate stability and external balance of payments equilibrium etc. The most commonly pursued objectives of monetary policy of the central banks across the world are maintenance of price stability (or controlling inflation) and achievement of economic growth.

Question 41: Describe the term 'Statutory Liquid ratio (SLR).

Answer: SLR: Scheduled Commercial Banks should maintain a stipulated percentage of their Total / Net DTL in cash or Gold, or prescribed Investments. SLR requires holding of Assets in one of the 3 categories (Cash / Gold/ Investments) by the Bank itself. SLR is an important tool for controlling liquidity in the Domestic Market by manipulating Bank Credit. Changes in SLR chiefly influence the availability of resources in the Banking System for lending. During the high liquidity period, a rise in SLR rises the fraction of Bank's locked in eligible Instruments & thus reduces Credit Creation Capacity. During period of economic slowdown, a reduction in SLR has the opposite effect. SLR also facilitates an effective operating market for Government Securities.

Question 42: Describe the term 'cash reserve ratio' (CRR).

Answer: Scheduled Commercial Banks should maintain a fraction of the total Net Demand & Time Liabilities (NDTL) as cash deposit with RBI. CRR has to be maintained as Cash with RBI. RBI does not pay any interest on such balances. CRR is an important quantitative tool in Liquidity Management. Higher the CRR, lower will be the liquidity of Banks, and vice – versa. During economic slowdown, RBI reduces CRR to enable to Banks to expand Credit and increases the money Supply. During periods of High Inflation, RBI increases CRR to contain credit expansion. RBI may set CRR in keeping with the broad objective of maintaining Monetary Stability.

Question 43: What is meant by term monetary policy framework?

Answer: Monetary policy Framework which has 3 components as under, Monetary Policy Objectives- providing explicit Guidance to the Policy Makers, Analytics of Monetary Policy- which focus on Transmission Mechanisms for implementation, Operating procedures- which focus on operating targets and instruments.

Question 44: Define 'monetary transmission mechanism'.

Answer: The process or Channels through which the change of Monetary Aggregate affects the level of Product and Prices is known as "Monetary Transmission Mechanism" i.e. how

they impact real variables such as aggregate output and employment.

Question 45: Define Repurchase transaction (REPO):
Answer: Instrument for borrowing funds by selling Securities with an agreement to re-purchase them on a mutually agreed future date at an agreed price which includes Interest for the Funds borrowed. Repo is a money market instrument. Repo operation takes place when other Banks borrow Money from RBI by giving Securities to the RBI. This is the first part of the transaction. Under second part the bank re-purchase the security and pay back to the RBI along with the interest for the sum borrowed.

Question 46: Define Reverse Repo.
Answer: Instrument for lending funds by purchasing securities with an agreement to resell them on a mutually agreed future date at an agreed price which includes interest for the funds lent. Reverse Repo Operation takes place when RBI borrows Money from Banks by giving them securities.

Question 47: What is meant by 'policy rate'?
Answer: Fixed Repo Rate quoted for sovereign Securities in the overnight segment of LAF is considered as the Policy Rate. RBI uses this rate for balancing liquidity. The policy rate is in fact key lending rate of the Central Bank in a country.

Question 48: How do asset prices respond to monetary policy?
Answer: Asset prices response to monetary policy changes, through spending, output and employment. A policy induced increase in the short term nominal interest rates makes debt instruments more attractive than equities in the eyes of investors leading to fall in equity prices. If stock prices fall after a monetary tightening, it leads to reduction in household financial wealth, leading to fall in consumption, output, and employment.

Question 49: Distinguish between the bank lending channel and the balance sheet channel of monetary transmission?
Answer: Two distinct credit channels- the bank lending channel operate by altering access of firms and households to bank credit and the balance sheet channel operate by the effect of monetary policy on the firm's balance sheet respectively.

Question 50: Explain the transmission of monetary policy outcomes through interest rate channel?
Answer: A contractionary monetary policy-induced increase in interest rates increases the cost of capital and the real cost of borrowing for firms and households who respond by cut back on their investment and consumption respectively affecting aggregate demand and employment.

Question 51: What is meant by the term 'monetary policy instruments'?
Answer: Monetary policy instruments are the various tools that a Central Bank can use to influence money market and credit conditions and pursue its monetary policy objectives.

Question 52: What role does Market Stabilization Scheme (MSS) play in our economy?
Answer: Under MSS Government borrows from RBI (additional to its Normal Borrowing) and issues Treasury Bills / Dated Securities for absorbing the excess liquidity from the market arising from Large Capital Inflows.

Question 53: Assess the role of Bank Rate as an instrument of monetary policy.
Answer: When MSF Rate changes alongside Policy Repo Rate changes, it also changes automatically. So, MSF assumes the role of Bank Rate and currently the Bank Rate is purely a signaling Rate & most Interest Rates are delinked from it. Now, it is used only for calculating penalty on default in maintenance of CRR & SLR.

Question 54: Open Market Operations.
Answer: Open Market Operations (OMO) is a term used for Market Operation conducted by RBI by way of Sale / purchase of Government Securities to/from the market with an

objective to adjust the rupee liquidity conditions in the market on a regular basis.

Question 55: Outline the role of Monetary Policy Committee (MPC).
Answer: RBI's Monetary Policy Department (MPD) assists Monetary Policy Committee (MPC) in formulating the Monetary Policy. MPC shall determine the Policy Rate required to achieve the Inflation targets. Accordingly, fixing of the benchmark policy interest rate (repo rate) is made through debate and majority vote by this panel of experts.

Question 56: Explain the objectives of monetary policy in an economy.
Answer :
Prima Objectives: -
- **Price Stability-** Establishment and Maintenance of stability in Prices (or controlling inflation)
- **Economic Stability-** Maintenance of Full Employment and achievement of high level of economy's growth

Other Objectives: Other Objectives which flow out of the Prima Objectives include –
1. Rapid **S**ustainable Economic Growth,
2. **D**ebt Management
3. Balance of Payments **E**quilibrium,
4. **E**xchange Rate Stability
5. Adequate flow of **c**redit to the Productive Sectors,
6. **S**tability of Long – Term Interest Rates to encourage Investments
7. Creation of an efficient Market for **G**overnment Securities.

Question 57: Explain the operational procedure of monetary policy in India. Or, Assess the instruments and targets of monetary policy of the Reserve Bank of India. Or What are the three major aspects of operational procedure of the monetary policy in India.
Answer : Operating Procedures: The day to day implementation of Monetary Policy by Central Banks through various Instruments is referred to as "Operating Procedures". The Operating Procedures Framework, i.e. Implementation of Monetary Policy involves 3 major aspects –

Choosing the	Meaning
Operating Target	Operating Target is the **variable** that the Monetary Policy can influence with its actions. Example: Inflation
Intermediate Target	**Intermediate Target** is a variable which the Central Bank can **hope to influence** to a reasonable degree through the **Operating Target** and which displays a predictable and stable relationship with the Goal Variables. Example: Economic Stability.
Policy Instruments	These are the various tools that a Central Bank can use to **influence Money Market** and **Credit Conditions** and pursue its Monetary Policy Objectives.

Question 58: A Central Bank is a 'banker's bank'. Elucidate the statement with illustrations.
Answer: A Central Bank is a banker's bank as it has almost same relation with other banks in the country as a commercial bank has with its customer. It accepts deposits from the commercial banks and offers them loans. The rate at which the central bank offers loans to the commercial banks is called Repo Rate. The rate at which commercial bank are allowed to park their surplus funds with RBI is called Reverse Repo Rate.

Question 59: Describe the Monetary policy framework agreement and Inflation targeting.
Answer: The organizational structure for monetary policy decisions in India are of two types:
1. **Monetary Policy Framework Agreement:** It is an Agreement reached between the Government of India and RBI on the Maximum tolerable Inflation Rate that RBI should target to achieve price stability. The RBI Act provides for a statutory basis for the implementation of the 'Flexible Inflation targeting Framework'. Announcement of an Official

Target Range for Inflation is known as Inflation Targeting. Earlier, RBI as following a 'Multiple Indicator' Approach. Now Inflation Targeting the primary objective of its Policy.

Inflation Target: Inflation target is to be set by every 5 years. Central Government has notified 4% Consumer Price Index (CPI) Inflation as the target for the period from 05.08.2016 to 31.03.2021 (Upper Tolerance Limit – 6%, Lower Tolerance Limit – 2%) Following Factors are notified by the Central Govt. as constituting failure to achieve Inflation Target – Average Inflation > Upper Tolerance Level of Inflation Target for any 3 consecutive quarters, or Average Inflation < Lower Tolerance level for any 3 Consecutive Quarters. CPI is chosen for Inflation Target, since it closely reflects cost of Living and has larger influence on Inflation Expectation compared to other Indicators / Anchors. RBI is mandated to publish a Monetary Policy report every 6 months, explaining the Sources of Inflation and the Forecast of Inflation for the coming period of 6 – 18 months.

Question 60 : Outline different components of the monetary policy framework for India.

Answer: In the execution of Monetary Policy, the Central Bank functions within a specified monetary policy Framework which has 3 components as under-

1. **Monetary Policy Objectives:** This provides explicit Guidance to the Policy Makers.
2. **Analytics of Monetary Policy:** This seeks to define the Transmission Mechanisms for implementation
3. **Operating Procedure:** This focuses on the Operating Targets and Instruments

Question 61: What is LAF and MSF

Answer :

1. **LAF**: RBI, being a Banker's Bank, provides Liquidity to banks when it faces shortage of Liquidity. Its objective is to assist Banks to adjust their day to day mismatches in Liquidity. Currently, RBI provides Financial Accommodation to the Commercial Banks through Repos/ Reverse Repos under this facility. SCBs & Primary Dealers, in case of – **Requirement:** avail of Liquidity from RBI, or **Excess Liquidity:** park excess Funds with RBI, on an overnight basis against the Collateral of Government Securities including State Govt. Securities. LAF is conducted at a fixed time daily on all Working Days in Mumbai (excluding Saturdays). **Overnight LAF:** Repo & Reverse Repo. **Term Repo:** Repos of 14 / 7 days duration.
2. **MSF**: RBI, also acts as a lender of Last Resort to Commercial Banks, in suitable situations. It has been introduced by RBI with the main aim to – a) reduce volatility in the Overnight Lending Rates in the Inter – Bank Market, and b) enable smooth monetary transmission. MSF provides a Safety Valve against unexpected Liquidity Shocks to the Banking System. It is the last resort for Banks once they exhaust all Borrowing Options including LAF. Banks can borrow through MSF on all working days (except Saturdays) from 7:00 pm to 7:30 pm, in Mumbai. Minimum Amount of MSF is Rs. 1 Crore and more will be available in multiples of Rs. 1 Crore.

Question 62: Explain the price stability as an objective of monetary policy of the Reserve Bank of India.

Answer : The Reserve Bank of India Act, 1934, in its preamble sets out the objectives of the Bank as to regulate the issue of bank notes and the keeping of reserves with a view to securing monetary stability in India and generally to operate the currency and credit system of the country to its advantage. It is to be noted that though price stability as an objective is not explicitly brought out, the monetary policy in India has evolved towards maintaining price stability and ensuring adequate flow of credit to the productive sectors of the economy. Price stability, as we know, is a necessary precondition for sustainable growth. Fundamentally the primary objective of monetary policy has been maintenance of a judicious balance between price stability and economic growth.

Question 63: A Central Bank is a 'lender of last resort' Elucidate the statement with illustrations.

Answer: One of the functions of Central Bank is the lender of last resort. Commercial banks

create liability many times more than their cash reserve. This arrangement works fine so long as people have confidence in the banking system of the country. However, there may be occasions when a bank suffers the crises of confidence. The depositors fear that the bank may run out of its cash reserve. They start withdrawing their deposits beyond what the bank can afford at a time. In this situation, the Central Bank act as a lender of the resort. It offers loans to the bank to cope with the crisis. It also stands as a guarantor of saving its solvency.

Question 64: Explain the monetary transmission mechanism of monetary policy?
Answer: the process or channels through which the change of monetary aggregates affects the level of product and price is known as monetary transmission mechanism. It defines how policy induced changes in the nominal money stock or in the short term nominal interest rates impact real variables such as aggregate output and employment. There are mainly four different mechanisms through which monetary policy influences the price level and the national income. These are:

1. **The interest rate channel**: A contractionary monetary policy induced increase in interest rates increases the cost of capital and the real cost of borrowing for firms and households who respond by cut back on their investment and consumption respectively.
2. **The exchange rate channel:** the exchange rate channel works through expenditure switching between domestic and foreign goods on account of appreciation/ depreciation of the domestic currency with its impact on net exports and consequently on domestic output and employment.
3. **The quantum channel (e.g. relating to money supply and credit):** two distinct credit channels- the bank lending channel and the balance sheet channel- operate by altering access of firm and household to bank credit and by the effect of monetary policy on the firm's balance sheet respectively.
4. **The asset price channel:** Asset prices generate important wealth effects that impact, through spending, output and employment.

Question 65: What is Market Stabilization Scheme?
Answer: Unser MSS Scheme, the Government of India borrows from the RBI (such borrowing being additional to its normal borrowing requirements) and issues treasury-bills/ dated securities for absorbing excess liquidity from the market arising from large capital inflows. The instrument for monetary management was introduced in 2004 following a MOU between the Reserve Bank of India (RBI) and the Government of India (GOI) with the primary aim of aiding sterilization operations of the RBI.

Question 66: What do you mean by Bank Rate?
Answer: The Bank Rate has been defined as the standard rate at which the *Reserve Bank is prepared to buy or re-discount bills of exchange or other commercial paper eligible for purchase under the Act.* The bank rate has been aligned to the Marginal Standing Facility (MSF) rate and, therefore, as and when the MSF rate changes alongside policy repo rate changes, the bank rate also changes automatically. MSF assumed the role of bank rate and currently the bank rate is purely a signaling rate and most interest rates are delinked from the bank rate.

Question 67: Critically examine the Open Market Operations (OMO) as an instrument of monetary policy.
Answer: Open Market Operations (OMO) refer to market operations conducted by the Reserve Bank of India by way of sale/purchase of Government securities to/from the market with an objective to adjust the rupee liquidity conditions in the market on a durable basis. When the RBI feels there is excess liquidity in the market, it resorts to sale of securities thereby sucking out the rupee liquidity. When the liquidity conditions are tight, the RBI will buy securities from the market, there by releasing liquidity into the market.

Question 68: What is the distinction between direct and indirect instruments of monetary policy?
Answer:
Direct Instruments comprise of –

a) Reserve Ratios (CRR, Statutory, Liquidity Reserve Ratios).

b) Directed Credit e.g. Prescribed targets for allocations of credit of Preferred / priority Sectors (e.g. Agriculture), and
c) Administered Interest Rates wherein the Deposit and Lending rates are prescribed by the Central Bank.

Indirect Instruments comprise of-
a) Repurchase Options (in short Repos), through LAF,
b) Open market Operations (OMOs)
c) Standing Facilities (SFS), and
d) Market – Based Discount Window.

Question 69: Distinguish between CRR and Statutory Liquidity Ratio (SLR).
Answer:

S.No.	Cash Reserve Ratio (CRR)	Statutory Liquidity Ratio (SLR)
1.	CRR refers to the proportion of total deposits of the commercial banks which they must keep as cash reserves with RBI.	Statutory Liquidity Ratio (SLR) refers to liquid assets of the commercial banks which they must maintain as a minimum percentage of their total deposits.
2.	This includes only cash.	The liquid assets comprises of Cash, Gold, Unencumbered approved securities.
3.	These are generally kept with RBI.	These are generally kept with bank itself.

Question 70: What are eligible securities for SLR?
Answer: The eligible securities for SLR are cash, Gold, or Investments in un-encumbered instruments that include:
1. **Treasury** – Bills of the Government of India.
2. **Dated Securities** including those issued by the Government of India under the Market Borrowings Programme and the Market Stabilization Scheme (MSS).
3. **State development loans** (SDLs) issued by the State Governments under their Market Borrowings Programme.
4. **Other Notified Instruments,** mainly securities issued by PSEs.

Part 5- Application Oriented Questions

Q1: Compute Reserve Money from the following data published by RBI

Components	(In billions of Rs.) As on 7 July 2017
Currency in Circulation	15428.40
Bankers' Deposits with RBI	4586.18
Other Deposits with RBI	183.30

Q2: Compute M3 from the following data published by RBI:

Components	(In billions of Rs.) As on 31 March 2017
Currency with the Public	12637.1
Demand Deposits with Banks	14106.3
Time Deposits with Banks	101489.5
Other Deposits with Reserve Bank	210.9

Q3 What will be the total credit created by the commercial banking system for a initial deposit of Rs. 1000/ for required reserve ratio 0.02, 0.05, and 0.10 percent respectively? Compute Credit Multiplier.

Q4. How would each of the following affect money multiplier and money supply?

i) Commercial banks in India decide to hold more excess reserves.
ii) Fearing shortage of money in ATMs, people decide to hoard money
iii) Banks open large number of ATMs all over the country.
iv) E banking becomes very common and nearly all people use them
v) During Festival season, people decide to use ATMs very often
vi) If banks decide to keep 100 reserves. What would be the effect on money multiplier and money supply?
vii) Suppose banks need to keep no reserves only 0% reserves are there.

Q5: What is the value of money multiplier in a system of 100% reserve banking?

Q6. Why you should hold money balances?

Q7. Will you choose to hold only interest bearing assets?

Q8 What will be the nature of Monetary policy undertaken by RBI in the following cases?

Q9. What would your choice be if you can pay for nearly all transactions through online transfers?

10. Do you think money is unique store of value?

Solution 1:

Reserve Money = Currency in Circulation + Bankers' Deposits with RBI + Other Deposits with RBI
= 15428.40+4596.18+183.30
= 20205.68

Solution 2:

Currency with Public + Demand Deposits with Banks + Time Deposits with Banks + Other Deposits with Reserve Bank
= 12637.1 + 14106.3 + 101489.5 + 210.9
= 1,28,443.9

Solution 3:

Credit Multiplier = 1/ Required Reserve Ratio
= 1000 * 1/0.02 = 50,000
= 1000 * 1/0.05 = 20,000
= 1000 * 1/0.10 = 10,000

Solution 4:

1) Excess reserves are those reserves that the commercial banks hold with the central bank in addition to the mandatory reserve requirements. Excess reserves result in an increase in reserve deposit ratio of banks; less money for lending reduces money multiplier; money supply declines.
2) When people hold more money, it increases the currency-deposit ratio; reduces money multiplier; money supply declines.
3) ATMs let people to withdraw cash from the bank as and when needed, reduce cost of conversion of deposits to cash and make deposits relatively more convenient. People hold less cash and more deposits, thus reducing the currency deposit ratio; increasing the money multiplier causing money supply to increase.
4) See iii) above
5) If people, for any reason are expected to withdraw money from ATMs with more frequency then banks will want to keep more reserves. This will raise the reserve ratio, and lower money multiplier. As a result money supply will decline.
6) If banks decide to keep 100% reserves, then the money Multiplier = 1/ required reserve ratio = 1/100% = 1. No additional money supply as there is no credit creation.
7) If the required reserve ratio is 0%, then money multiplier is infinite and there will be unlimited money creation. There will be chaos with spiralling prices as money supply is too much and real output cannot increase.

Answer 5: In a system of 100% reserve banking if banks keep the whole deposits as reserve, deposits simply replace currency as reserves. Therefore, no new extra claims will be created and no new money will be created by banks. Thus if banks decides to keep 100% reserves, then the Money multiplier = 1/requires reserve ratio = 1/100% = 1. No additional money supply as there is no credit creation.

Solution 6: Transaction, precautionary and Speculative demand depends on nature of the

holder- institutional payments mechanism and the gap between receipt and use of money, amount of income and change in general level of price , cost of conversion of near money to money.

Solution 7: Not always- Partly held in assets- Depends on costs in terms of time and resources to keep moving in and out of bonds or other assets, the levels of interest payments, expectations about bond prices, future price levels- concept of speculative demand for money

Increased Repo rate by 50 bps	Sell security in open market
Reduced CRR	Terminates MSF
Increase interest rate chargeable by commercial bank	Initiates reverse repo transaction
Increases supply of currency and coins	Changes in SLR

Solution 9: Depends on financial infrastructure, how costless and immediate are transfers, preferences, attitude towards risks and the opportunity costs.

Solution 10: Financial assets other than money are also performing the function of store of value. Just as money has, the financial assets have fixed nominal value over time and represent generalized purchasing power. Therefore, money is not a unique store of value.

Unit 1- Theories of International Trade

Question 1: Define International Trade?

Answer 1: International trade is the ***exchange of goods and services*** as well as resources between countries. It involves transactions between residents of different countries in multiple currencies.

Question 2: How international Trade is different from Domestic Trade

Point	International Trade	Domestic Trade
Meaning	Exchange of goods, services, resources etc. between / amongst different countries.	Exchange of goods, services, resources, etc within domestic territory of a country.
Persons	Transactions between Residents of different countries.	Transactions between / amongst Residents of the same country.
Currency	2 or more currencies are involved.	Only one currency (Local Currency) is involved.
Regulations	This involves multiple Legal Systems, detailed documentation, procedural formalities, Trade Barriers, Shipping and Transportation issues etc.	This involves law of only one country and less documentation and procedural formalities.
Tariff	Customs Tariff is applicable.	Domestic Tariff/ Regulations are applicable.

Question 3: What is meant by Opportunity Cost?

Answer: Opportunity cost is the value of the ***forgone option***. It is the amount of a second commodity that must be given up to release just enough resources to produce one extra unit of the first commodity.

Question 4: Critically examine arguments for and against international trade?

OR

What consequences do you foresee for the industrial sector if a nation has greater openness of trade? (if the question is asked for 4 marks write 4 for and 4 against points)

Answer: The arguments in support of international trade are:

1. **Cost Efficiency:** Economic efficiency increases due to quantitative and qualitative benefits of extended division of labour, economies of large-scale production, betterment of manufacturing capabilities and other factors
2. **Wide range of Products:** International trade enables consumers to have access to wider variety of goods and services that would not otherwise be available.
3. **Innovation:** Trade necessitates increased use of automation, supports technological change, stimulates innovations, and facilitates greater investment in research and development and productivity improvement in the economy.
4. **Employment:** Trade creates International Employment Opportunities by boosting economic sectors that create stable jobs and usually higher incomes, thus improving livelihoods.
5. **Competition:** Increase in competition reduces the chances of Domestic Monopolies, and is beneficial to the public.
6. **There are other benefits such as Material at Cheaper cost, Better Standards**, **Peace and Stability, Diversification, Labour Mobility, price stability, etc.**

The arguments against international trade are:

1. **Negative Impact on Labour class:** Due to import of automated technologies, which

reduces the Labour involvement in production, the demand for un-skilled, semi-skilled labour falls and this results into depression and unemployment.

2. **Exploitation of Resources:** Excessive importance for Exports leads to **unsustainable production and consumption,** thereby depleting natural resources at a higher rate.
3. International Trade **threatens local infant industries** through stiff competition.
4. **Recession** in one country may be **transmitted** and passed on to another country, leading to overall depression.
5. Excessive exports may cause shortages of many commodities in the exporting countries and lead to high inflation (e.g. onion price rise in 2014).
6. **Unwanted and harmful goods** may be imported into a country. (Example- Dumping of Chinese Products)

Question 5: How does trade increase economic efficiency?

Answer: Economic efficiency increases due to **quantitative and qualitative** benefits of extended division of labour, economies of large-scale production, betterment of manufacturing capabilities, increased competitiveness and profitability by adoption of cost reducing technology and business practices and decrease in the likelihood of domestic monopolies. Efficient deployment of productive resources natural, human, industrial and financial resources ensures productive gains.

Question 6: what is meant by absolute advantage?

Answer: ***Adam Smith*** propounded the ***Theory of Absolute Cost Advantage*** on the basis of Foreign Trade. Under this Theory, an exchange of goods will take place only if each of the two countries can produce one commodity at an ***absolutely lower production cost than the other*** country.

Question 7: What is the major idea behind Mercantilist's view of trade?

Answer: Mercantilism advocated ***maximizing exports*** in order to bring in ***more precious metals*** and minimizing imports through the state imposing very high tariffs on foreign goods. The nation's wealth and power are best served by increasing exports and collecting ***precious metals in return.***

Question 8: What is the essence of the theory of absolute advantage?

Answer: Absolute advantage refers to the ability of a party to produce ***more of a good or service*** than the competitors, ***using the same amount of resources***. An exchange of goods will take place only if each country which has an ***absolute advantage over another country*** in the production of an item can trade such item and hence gain in terms of international trade.

Question 9: Mention the core principle of the theory of comparative advantage?
Or, What does the Ricardian Model suggest regarding the effect of trade?
Or, What is the basis for International Trade according to Ricardo?

Answer: ***David Ricardo*** developed the classical ***theory of comparative advantage*** which states that even if one nation is less efficient than (has an absolute disadvantage with respect to) the other nation in the production of all commodities, there is still scope for mutually beneficial trade.

The first nation should specialize in the production and ***export*** of the commodity in which its ***absolute disadvantage is smaller*** (this is the commodity of its comparative advantage) and ***import*** the commodity in which it's absolute ***disadvantage is greater*** (this is the commodity of its comparative disadvantage). Comparative advantage differences between nations are explained by ***exogenous factors*** which could be due to the differences in national characteristics.

Question 10: What is meant by 'factor endowment' in the theory of international trade?

Answer: 'Factor endowment' refers to the ***overall availability of usable resources including both natural and man-made means of production.*** It states that comparative advantage in cost of production is explained exclusively by the ***differences in factor endowments*** of the nations. And international trade occurs because different countries have different factor endowment.

Question 11: What is the crux of Heckscher-Ohlin theory of international trade?

Answer: The Heckscher-Ohlin Trade Theorem establishes that a country tends to specialize in the ***export*** of a commodity whose production requires ***intensive use of its abundant resources*** and ***imports a commodity whose production requires intensive use of its scarce resources.***

Question 12: What do you understand by 'factor price equalisation' in the context of international trade?

Answer: The Factor-Price Equalization Theorem states that international trade tends to ***equalize the factor prices between the trading nations.*** It says that if the prices of the output of goods are equalized between countries engaged in free trade, then the price of input factors will also be equalized between countries. This implies that the wages and rents will meet across the countries with free trade.

Question 13: Explain the following elements individually as an underlying reason that explains difference among Nations

Factor	Explanation
Domestic Economy'	The more competition there is in the domestic economy, the more productive and competitive the domestic firms are likely to be abroad and the higher value-added productivity and country prosperity.
'Internalization	Openness for international economic activities increases a country's economic performance. Export-led competitiveness is often associated with growth orientation in the domestic economy. Higher integration with the international economy results in more productive resource allocation and higher living standards.
Government	Direct State interventions in business activities are minimized. Government policies concentrate on creating a competitive environment for enterprises and on providing macro-economic and social conditions that are predictable and thus minimizing the external risks for economic activities. It is flexible in adapting its economic policies to a changing international environment.
Finance	A well-developed internationally integrated financial sector in a country supports its international competitiveness. The efficiency of the financial sector is best measured by the narrowness of the "spread" between the rate of interest that borrowers pay, and the rate those depositors receive.
Infrastructure	A well-developed, infrastructure supports economic activity. It includes the availability of natural resources and functional business systems, information technology, transport, communication and education, and an efficient protection of the environment.
Management	A competitive product and service reflects managerial ability, its long term orientation, ability to adapt to changes in the competitive environment, a level of entrepreneurship and skill for integration and differentiation of business activities.
Science & technology'	Competitive advantage can be built on efficient and innovative application of existing technologies. Investment in research and innovative activities creating new knowledge is crucial for a country in a more mature stage of economic development.

Quantity of people'	A skilled labour force with a positive attitude increases a country's productivity and competitiveness. Education, the technical ability of labour, the quality of management and efficiency all contribute to competitiveness. All this means that to pursue a competitive strategy many coordinated changes in human resource development are simultaneously needed rather than a few high profile initiatives in one or two areas.

Question 14: "Specialization in production always increases prosperity of a country". Do you agree with the statement? Substantiate your answer.

Answer: "Specialization in production always increases the prosperity of a country" will take place

1) If each of the two countries can produce one commodity at an absolutely lower production cost than the other country. The country will specialize in the production and export of a commodity in which it has an absolute cost advantage.
2) Also in the theory of comparative advantage it is stated that international trade will take place and countries will still be benefited if they specialize in production of commodity in which comparative disadvantage is lesser or absolute advantage is higher.

Question 15: Explain the Heckscher-Ohlin theory of international trade. Or, What are the arguments put forth in modern theory of international trade?

Answer:

1. This theory is also known as **factor-endowment theory of trade** or **Modern Theory** of Trade.
2. The Heckscher-Ohlin (H-O) model studies the case that two countries have **different factor endowments** under **identical production function and identical preferences**. The difference in factor endowment results in two countries having different factor prices in the beginning. Consequently, H-O model implies that the two countries will have different cost functions.
3. The theory states that a country's exports depend on its **resources endowment** i.e. whether the country is capital-abundant or labour-abundant. If a country is a capital abundant one, it will produce and export capital-intensive goods relatively more cheaply than another country. Likewise, a labour-abundant country will produce and export labour-intensive goods relatively more cheaply than another country.
4. The labour-abundant countries have comparative cost advantage in the production of goods which require labour-intensive technology and by the same reasoning; capital-abundant countries have comparative cost advantage in the production of goods that need capital-intensive technology.
5. The Heckscher-Ohlin Trade Theorem establishes that a country tends to specialize in the export of a commodity whose production requires intensive use of its abundant resources and imports a commodity whose production requires intensive use of its scarce resources.

Question 16: Describe the reasons for superiority of Heckscher Ohlin Theory of International Trade over classical theory of International Trade.

Answer:

	Classical Theory	Modern Theory
Basis	Based on Labour Theory of Value	Based on Factor Endowment of Nations.
Domestic vs. International Trade	International Trade is considered as distinct and different from Domestic Trade.	International Trade is considered as an extension (special case) of inter – regional trade.
Reason for Trade	Comparative Cost Advantage of Nations	Comparative Factor Endowment of Nations.
Factors of production	Labour is considered as the only factor of production.	Labour and capital are considered as the factors of production. (2- Model)

Reason of Cost Variations	Comparative Advantage arises due to superior skills and techniques o workers.	Comparative advantage arises due to relative differences in availability of resources. Factor Prices and Factor Requirements for Production.
Focus on	Comparative Costs of Goods only.	Cost of Goods, and the underlying reason, I.e. Factor Prices and their variations.

Unit 2- Instruments of Trade Policy

Question 17: Define Trade Policy.
Answer: Trade policy encompasses all instruments that governments may use to ***promote or restrict imports and exports***. Trade policy also includes the approach taken by countries in trade negotiations.

Question 18 What are the main purposes of Trade policy?
Answer: The main purpose of trade policy is typically to **restrict imports and/or encourage exports.**
Other objectives include:
1. The highest possible degree of free trade.
2. An efficient internal market and open trade policy.
3. A strengthened multilateral trade system the world trade organization (WTO)
4. Increasing trade among different countries and greater investment.

Question 20: What are the main types of trade policy instruments?
Answer: The instruments of trade policy are broadly classified into ***price- related measures such as tariffs*** and ***non-price measures or non-tariff measures*** (NTMs).

Question 21: Define Tariff.
Answer: Tariffs, also known as custom duties, are ***basically taxes or duties imposed*** on ***goods and services which are imported or exported.***

Question 22: Outline the main goals of tariffs.
Answer: The main goals of tariffs are to ***raise revenue for the government*** and more importantly to protect the domestic ***import competing industries.***

Question 23: What is meant by 'specific tariff'?
Answer: A specific tariff is an import duty that assigns a ***fixed monetary tax per physical unit*** of the good imported. It is calculated based on a unit of measure, such as weight, volume, etc. of the imported goods.

Question 24: Explain the term 'ad-valorem tariff'.
Answer: An ad valorem tariff is levied as a cons***tant percentage of the monetary value of one unit of the imported good.*** A 20% ad valorem tariff on any bicycle generates a Rs.1000/ payment on each imported bicycle priced at Rs.5,000/ in the world market; and if the price rises to Rs. 10,000, it generates a payment of Rs.2,000/.

Question 25: What is meant by mixed tariff?
Answer: It is the combination of ***Specific tariff*** or ***Ad Valorem tariffs***. Mixed tariffs are expressed either based on the value of the imported goods (an ad valorem rate) or on the basis of a unit of measure of the imported goods (a specific duty) depending on which

generates the most income (or least income at times) for the nation.

Question 26: Define bound tariff.
Answer: A bound tariff is a tariff which a ***WTO member binds itself with a legal commitment not to raise it above a certain level.*** The bound rates are specific to individual products and represent the maximum level of import duty that can be levied on a product imported by that member.

Question 27: What is the purpose of binding a tariff?
Answer: The purpose of binding a tariff during negotiations period is that, the members ***agree to limit their right to set tariff levels beyond a certain level.*** A bound tariff ensures transparency and predictability.

Question 28: How does escalated tariff structure work?
Answer: It refers to the system wherein the ***nominal tariff rates*** on imports of manufactured goods are h***igher than the nominal tariff rates on intermediate inputs and raw materials,*** i.e. the tariff on a product increases as that product moves through the value-added chain.

Question 29: Define dumping.
Answer: Dumping occurs when manufacturers se***ll goods in a foreign country below the sales prices in their domestic market*** or ***below their full average cost*** of the product. It hurts domestic producer

Question 30: What is meant by Anti-dumping measure?
Answer: Anti-dumping measures are additional import duties to offset the foreign firm's unfair price advantage.

Question 31: Why are countervailing duties imposed?
Answer: CVD are tariff which seeks to ***offset artificially low prices charged by exporters who enjoys export subsidies and tax concessions*** offered to them in their home Country.

Question 32: Describe the term Non-tariff measure (NTM).
Answer: These are policy measures, ***other than Ordinary Custom Tariff*** that can potentially have an effect on international trade in goods, changing quantities traded or prices, or both. NTMs include regulations that ***restrict trade or that facilitate higher trade.***

Question 33: What is the purpose of SPS measures?
Answer: SPS are applied to protect ***human, animal or plant life*** from risks arising from additives, pests, contaminants, toxins or disease – causing organisms, and to protect bio-diversity.

Question 34: What do you understand by the term import quota?/ Import binding quota?
Answer: An import quota is a ***direct restriction*** which specifies that ***only a certain physical amount of the good will be allowed into the country during a given time period***, usually one year. Import quotas are typically ***set below the free trade level of imports*** and are usually enforced by issuing licenses. This is referred to as binding quota.

Question 35: Explain the concept of local content requirements in the context of trade policy.
Answer: The local content requirements that order that a ***specified fraction of final good***

be ***produced domestically*** as it may act as a trade barrier in case of investments.

Question 36: Explain the concept of 'Voluntary Export Restraints'.
Answer:
1. Voluntary Export Restraints (VERs) refer to a type of i***nformal quota administered by an exporting country voluntarily restraining the quantity of goods that can be exported out of that country during a specified period of time.***
2. Such restraints originate primarily from ***political considerations*** and are imposed based on negotiations of the ***importer with the exporter***.
3. The reason for the exporter to agree to a VER is to ***avoid*** the effects of possible ***retaliatory trade restraints*** that may be imposed by the importer.
4. VERs may arise when the import-competing industries seek protection from a surge of imports from particular exporting countries.

Question 37: Outline the meaning of 'Trigger-price mechanism'.
Answer: The countries engage in ***'unfair'*** foreign trade practices distorting trade. The ***affected importing countries***, ***respond quickly*** by measures in the form of tariff responses to offset the distortion. These policies are often referred to as "trigger price' mechanisms. E.g. Anti-dumping duties.

Question 38: What do you understand by Import Non-binding quota?
Answer: A non-binding quota is a quota that is ***set at or above the free trade level of imports***, thus having little effect on trade.

Question 39: Explain the absolute Import Quota.
Answer: ***Absolute quotas*** or ***quotas of a permanent*** nature limit the quantity of imports to a specified level during a ***specified period of time*** and the imports can take place any time of the year. No condition is attached to the country of origin of the product. For example: 100 tonnes of soya beans import of which can take place any time of the year from nay country.

Question 40: Explain the tariff rate Import Quota.
Answer: When ***country allocation is specifies***, a ***fixed volume or value of the product must originate in one or more countries*** this is known as tariff rate quota. Example: A quota of 100 tonnes of soya beans that can be imported any time of the year, but where 75 tonnes must originate in country A and 25 tonnes in Country B. In addition there are seasonal quotas and temporary quotas.

Question 41: Explain the term 'quota rent'.
Answer: With a quota, the Government, of course, receives no revenue. The profits received by the holders of such import licenses are known as 'quota rents'.

Question 42: Distinguish between different types of trade policy measures. What are the effects of each?
Answer:
A) **Tariff Measures:** Tariff (also called Customs Duty) is a tax or duty imposed on goods and services that are imported or exported. Tariff increases the price of imported Goods in the local market only. Their prices in the world market are not affected.
B) **Non-Tariff Measures-**These are policy measures, other than Ordinary Custom Tariff, that can have an effect on international trade in goods, changing quantities traded or prices, or both.

Question 43: Evaluate use of tariffs as a trade policy instrument.
Answer: The term 'tariff' would refer to import duties. Tariffs are used for altering the relative prices of goods and services imported, so as to contract the domestic demand and thus regulate the volume of their imports. ***Tariffs leave the world market price of the goods***

affected; while raising their prices in the domestic market. The main aim of tariffs is to raise ***revenue for the government***, and more importantly to ***protect the domestic import-competing industries.***

Question 44: Outline the different non-tariff measures adopted by countries.

Answer: The different non-tariff measures adopted by countries are:

Technical Measures:	Technical measures refer to ***product-specific properties*** such as ***characteristics of the product***, technical specifications and ***production processes.*** These measures are intended for ensuring product quality, food safety, environmental protection, national security and protection of animal and plant health.
Non-technical Measures:	Non-technical measures relate to trade requirements; for example***; shipping requirements, custom formalities, trade rules, taxation policies***, etc. It is further distinguished as- 1. ***Hard measures*** (e.g. Price and quantity control measures), 2. ***Threat measures*** (e.g. Anti-dumping and safeguards) and 3. ***Other measures*** such as trade-related finance and investment measures. Furthermore, categorization also distinguish between- 1. ***Import-related measures***- imposed by the importing country, and 2. ***Export-related measures***- imposed by the exporting country itself. 3. ***Procedural obstacles (PO)*** which are practical problems in administration, transportation, delays in testing, certification etc that may make it difficult for businesses to adhere to a given regulation.

Question 45: Governments do not conform to free trade despite the potential efficiency and welfare outcomes it will promote. Elucidate the statement. Give examples.

Answer: The governments employ different devices for restricting the free flow of goods and services across their borders. It is in fact that fair competition is does not always exist and unobstructed international trade brings in severe dislocation to many domestic firms and industries on account of difficult adjustment problems. Therefore, individuals and organizations continue to force policy makers and regulatory authorities to restrict imports or to artificially boost up the size of exports.

Question 46: How do import tariffs influence international trade? Or What are the effects of tariff measures?

Answer: Tariff increases the price of imported Goods in the local market only. Their prices in the world market are not affected. The impact on tariff includes the following-

a. To protect the domestic import – competing industries
b. To contribute to increase in Government Revenue in the form of Import Duties.
c. To restrict trade, by increasing the price of imported goods and services,
d. To discourage consumption of imported foreign goods, by making them "dear",
e. To decrease the volume of imported goods into the country,

Negative impact: However, tariff also has following negative impact-

a) Reduction in consumer well- being, due to higher cost of imported goods
b) Increase in prices by Domestic Producers of same item, to match with high cost of imported goods,
c) Loss of output and employment in case of sectors that are rendered redundant due to import of goods
d) Creation of trade distortions, by encouraging inefficient production in Home Country,

and discourage efficient production in the rest of the world.

Question 47: Distinguish between anti-dumping duties and countervailing duties. What purpose do they serve?

Answer:

S.no.	Anti-dumping Duties	Countervailing duties
1.	Anti-dumping measures are additional import duties so as to ***offset the foreign firm's unfair price advantage.***	Countervailing duties are tariffs to offset the ***artificially low prices charged by exporters who enjoy export subsidies and tax concessions offered by the governments*** in their home country.
2.	For example: In January 2017, India imposed anti- dumping duties on color-coated or pre-painted flat steel products imported into the country from China and European nations for a period not exceeding six months	For example, in 2016, in order to protect its domestic industry, India imposed 12.5% countervailing duty on Gold jewellery imports from ASEAN

Question 48: Describe different technical barriers to trade and their effects on trade.

Answer:

1. Technical Barriers to Trade (TBT) cover ***both food and non-food traded products.***
2. It refers to mandatory 'Standards and Technical Regulations' that define the specific characteristics that a product should have, such as its size, shape, design, labeling / marking / packaging, functionality or performance and production methods.
3. Any product that does not confirm to the standard cannot be imported. There is a procedure for compulsory Certification before shipment from the Exporting Country.

Effect on Trade:-Sometimes, TBT measures can be used effectively as obstacles to imports or to discriminate against imports and protect domestic products. Altering products and production processes to comply with the diverse requirements in export markets may be either impossible for the exporting country or would obviously raise costs hurting the competitiveness of the exporting country.

Some examples of TBT are: food laws, quality standards, industrial standards, organic certification, eco-labeling, and marketing and label requirements.

Question 49: What do you understand by the term 'Most-Favoured-Nation' (MFN)?

Answer: Most-favored-nation (MFN) states that ***any advantage, favor, privilege or immunity granted by any contracting party to any product originating in or destined for any other country shall be extended immediately and unconditionally to the like product originating or destined for the territories of all other contracting parties.*** If a country lowers a trade barrier or opens a market, it has to do so for the same goods or services from all other WTO members.

Question 50: What is meant by National Treatment Principle?

Answer: Imported goods should be treated ***no less favorably than domestically produced goods*** (at least after Foreign Goods have entered the market). A Country should not discriminate between its own and foreign products, services & nationals. For instance, once imported apples reach Indian market, they cannot be discriminated against and should be treated at par in respect of marketing

Unit 3- Trade Negotiation

Question 51: Define the term Regional Trade agreement/ Regional preferential trade agreement? What are its major advantages?

Answer: Regional Trade Agreements (RTAs) are ***groupings of countries***, which are formed with the ***objective of reducing barriers to trade between member countries;*** not

necessarily belonging to the same geographical region. They reduce trade barriers on a reciprocal and preferential basis for only the members of the group. E.g.: Global System of Trade Preferences among Developing Countries (GSTP).

Question 52: How does WTO agreement ensure market access?
Answer: The WTO aims to increase world trade by enhancing market access by **converting all non- tariff barriers into tariffs** which are subject to country specific limits. Further, in major multilateral agreement like agreement on agriculture (AOA), specific targets have been specified for ensuring market access

Question 53: Describe the functioning of Dispute Settlement mechanism.
Answer: The ***dispute can be referred to the WTO*** where WTO pursue a carefully stage by stage procedure. It passes ***judgment by the panel of experts*** and also gives the ***opportunity to appeal ruling on legal grounds***. The ***decisions*** of the dispute settlement body are ***final and binding.***

Question 54: What is major aim of agreement on the 'Application of Sanitary and Phytosanitary (SPS) Measures?
Answer: Agreement on the Application of Sanitary and Phytosanitary (SPS) Measures ***establishes multilateral frameworks for the planning, adoption and implementation of sanitary and phytosanitary measures*** to prevent such measures from being used for arbitrary or unjustifiable discrimination or for camouflaged restraint on international trade and to minimize their adverse effects on trade.

Question 55: What purpose does the Agreement on Technical Barriers to Trade (TBT) serve?
Answer: Agreement on Technical Barriers to Trade (TBT) aims to prevent standards and conformity assessment systems from becoming unnecessary trade barriers by securing their transparency and harmonization with international standards.

Question 56: What purpose does Agreement on Trade Related Investment Measures Stipulate (TRIMs)?
Answer: Agreement on Trade-Related Investment Measures (TRIMs) establishes disciplines governing investment measures in ***relation to cross-border investments*** by stipulating that countries receiving foreign investments shall ***not impose investment measures*** such as requirements, conditions and restrictions ***inconsistent with the provisions of the principle*** of ***national treatment*** and general elimination of quantitative restrictions.

Question 57: What do you understand by agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS)?
Answer: This agreement stipulates most-favored-nation treatment and national treatment for intellectual properties, such as copyright, trademarks, geographical indications, industrial designs, patents, IC layout designs and undisclosed information.

In addition, it requires member countries to maintain high levels of intellectual property protection and to administer a system of enforcement of such rights. It also stipulates procedures for the settlement of disputes related to the agreement.

Question 58: Explain Unilateral Trade Agreement as a type of Regional Trade Agreements.
Answer: Unilateral Trade Agreements under which an ***importing country offers trade incentives in order to encourage exporting country to engage in international economic activities that will improve the exporting country's economy***. E.g. generalized system of preferences.

Question 59: Explain Bilateral Trade Agreements as a type of Regional Trade Agreements.
Answer: Bilateral Agreements are ***agreements which set rules of trade between two***

countries, two blocs or a bloc and a country. These may be limited to certain goods and services or certain types of market entry barriers. E.g.: South Africa Trade Agreement; ASEAN-India Free Trade Area.

Question 60: Explain the term Multilateral Trade Agreement.
Answer: This trade ***agreement is between many nations at one time.*** They are very complicated to negotiate, but are very powerful once all parties/ nations sign the agreement. Example: WTO Agreement. The primary benefits of multilateral agreements are that all nations get treated equally.

Question 61: Explain the term Pluri-Lateral Agreement.
Answer: It is an agreement between ***more than two countries, but not a great many,*** which could then be a multilateral agreement. Member countries would be given the choice to agree to new rules on a voluntary basis.

Question 62: Explain each of the term individually
Answer:

Type	Description
Trading Bloc	It has a ***group of countries that have a free trade agreement between themselves*** and may apply a common external tariff to other countries Example: Arab League (AL), European Free Trade Association (EFTA)
Free-trade area	It is a ***group of countries that eliminate all tariff barriers*** on trade with each other and ***retains independence*** in determining their tariffs with non-members. Example: NAFTA
A customs union	It is a ***group of countries that eliminate all tariffs*** on trade among themselves ***but maintain a common external tariff*** on trade with countries outside the union (thus technically violating MFN). e.g. EC, MERCOSUR.
Common Market	1. A Common Market deepens a customs union by providing for the free flow of *factors of production (labor and capital) in* ***addition to the free flow of outputs.*** 2. The member countries attempt to harmonize some institutional arrangements and commercial and financial laws and regulations among themselves. There are also common barriers against non-members (e.g., EU, ASEAN)
Economic and Monetary Union	Members share a common currency and macroeconomic policies. For example, the European Union countries implement and adopt a single currency.

Question 63: Summarize the course of history of trade negotiations.
Answer: A Trade negotiation is a process in which Nations meet together to discuss the possibility of trade, with the goal of reaching a Trade Agreement. Both Nations are interested in negotiating a successful trade agreement because it has the potential of promoting economic growth and allowing companies to expand their markets, but both are also concerned with protecting their economy and safety. Sometimes, trade negotiations may involve more than two Nations, along with Moderators who take a neutral stance to help countries reach an agreement.

Question 64: Describe the structure of World Trade Organization.
Answer:

Structure of WTO: WTO is ***headed by a Director General*** and has the following structure-

1. MINISTERIAL CONFERENCE:

i. It is the ***highest-Level Body***, which can take decisions on all matters under any of the multilateral trade agreements.
ii. It ***meets at-least once every two years***.

2. GENERAL CONFERENCE:

i. It acts as the ***Trade Policy Review Body and the Dispute Settlement Body***. It refers to the Ministerial Conference.
ii. It meets several times a year.

It consists of:

i. The Goods Council
ii. Services Council
iii. Intellectual Property

3. Committees and Working Groups: There are many ***Specialized Committees working under each council*** (e.g. 11 committees under Goods Council). These committees deal with individual agreements and specific areas, e.g. Membership Application, Development etc.

Question 65: List out the major concerns in respect of functioning of the WTO.

Answer:

1. The developing countries contend that the real expansion of trade in the three key areas of ***agriculture, textiles and services has been dismal.***
2. ***Protectionism and lack of willingness*** among developed countries ***to provide market access*** on a multilateral basis has driven many developing countries to seek regional alternatives.
3. Another major issue concerns ***'tariff escalation'*** where an importing country protects its processing or manufacturing industry by setting lower duties on imports of raw materials and components, and higher duties on finished products.
4. Developing countries complain that they ***face exceptionally high tariffs*** on selected products in many markets.
5. LDCs are hugely disadvantaged and vulnerable due to ***lack of factor inputs, lack of capital, lack of infrastructure,*** etc.
6. Significant issues like ***Climate Change, high and volatile Food Prices,*** and ***energy production and consumption*** are all issues that have not been effectively addressed.

Question 66: What are the peculiarities of GATT?

Answer: The peculiarities of GATT are as follows:

1. GATT is a ***Multilateral Trade Agreement*** created in ***January 1948*** to achieve a broad, multilateral and free worldwide system of trading.
2. GATT ***provided the rules of international trade*** from 1948 to 1994 (WTO applicable from 1995 onwards)
3. GATT governed international trade, working along with the ***World Bank & International Monetary Fund.***

Question 67: What are the major functions of WTO?

Answer:

1. The principal objective of the WTO is to ***facilitate the flow of international trade smoothly***, freely, fairly and predictably.
2. To act as a ***forum for trade negotiations*** among member governments, administering trade agreements, reviewing national trade policies
3. ***Assisting developing countries*** in trade policy issues, through technical assistance and training programmes.
4. To ***cooperating with other international organizations***.

Unit 4- International Capital Movement

Question 68: What are the different types of Foreign Capital?

OR

What are different types of borrowings as a type of foreign capital?

Answer:

1. **Foreign aid or assistance**
   - ***Tied aid*** with strict mandates regarding the use of money
   - ***Untied aid*** where there are no such
   - ***voluntary transfer*** stipulations from institutions like IMF, WB
   - ***Multilateral aid*** from many governments who pool funds to international organizations like the World Bank
2. **Borrowings**
   - Direct ***inter government*** loans
   - Loans from ***international institutions(***e.g. world bank, IMF)
   - ***Soft Loans*** for e.g. from affiliates of World Bank such as IDA
   - ***External commercial borrowing***
   - Trade credit facilities
3. **Investments**

   Foreign direct investment (FDI) -in industrial, commercial and similar other enterprises

   Foreign portfolio investment (FPI) in bonds, stocks and securities
4. **Deposits from non-resident Indians (NRI)**

Question 69: Define Foreign Direct Investment.

Answer: FDI is a process in which the ***Resident of one country*** (i.e. Home Country) ***acquires ownership of an Asset in another country*** (i.e. Host Country). Such movement of capital involves ***ownership, control and management*** of the Asset in the Host Country. It also takes place by acquisition of ***more than 10% of shares of target assets***.

Question 70: Enumerate the components of Foreign Direct Investment?

Answer: FDI has three components-

1. Equity Capital,
2. Reinvested Earnings,
3. Other direct Capital in the form of intra-company loans between Direct Investors (Parent) and Affiliate Enterprises.

Question 71: Distinguish between Vertical, Horizontal and Conglomerate foreign direct investment.

Answer:

A Horizontal Direct Investment is said to take place when the investor establishes the ***same type of business operation in a foreign country as it operates in its home country.*** *For example, a cell phone service provider based in the United States moving to India to provide the same service.*

A vertical investment is one under which the investor establishes or acquires a business activity in a foreign country which is ***different from the investor's main business activity yet in some way supplements its major activity.*** *For example; an automobile manufacturing company may acquire an interest in a foreign company that supplies parts or raw materials required for the company.*

A conglomerate type of foreign direct investment is one where an investor makes a foreign investment in a business that is ***unrelated to its existing business in its home country.*** *For example, an automobile manufacturing company may acquire an interest in a foreign company that makes furniture*

Question 72: What is meant by foreign portfolio investment?

Answer: Foreign portfolio investment is the flow of ***'financial capital' rather than 'real capital' and does not involve ownership, control, or management on the part of the investor.*** *Examples of foreign portfolio investment are the deposit of funds in an Indian or a*

British bank by an Italian company or the purchase of a bond (a certificate of indebtedness) of a Swiss company or of the Swiss government by a citizen or company based in France.

Question 73: What are different routes for securing FDI?
Answer: The different routes of securing FDI are-
1. ***Opening of a subsidiary or associate*** company in a foreign country,
2. ***Equity injection*** into an overseas company,
3. ***Acquiring a controlling interest*** in an existing foreign company,
4. ***Mergers and acquisitions***(M&A)
5. ***Joint venture*** with a foreign company.
6. ***Green field investment*** (establishment of a new overseas affiliate for freshly starting production by a parent company).

Question 74: What is meant by automatic route?
Answer: Automatic Route is a route where ***no prior approval of the Government or RBI*** to Indian company for foreign direct investments.

Question 75: What are the reasons for the speculative nature of foreign portfolio investments?
Answer: Portfolio Investors might ***invest and may often shift their capital with changes in these prospects***. Once investor confidence is shaken, ***such capital has a tendency to speedily shift from one country to another***. Also it does not aim at creating any capital assets. Therefore, portfolio investments are expected to be speculative.

Question 76: Why did India discourage FDI in its early stages?
Answer: India discourages FDI because there is a policy of import substitution, extensive controls and selective policy.

Question 77: What are the characteristics of Foreign Portfolio Investments (FPI)?
Answer:
a) FPI focuses only on obtaining an ***adequate Return on Financial Capital*** by way of Dividends, interest and Capital Appreciation.
b) Portfolio Capital moves to a Recipient Country which has revealed its potential for higher returns and profitability. Investors may ***often shift their Capital in case of changes in these prospects.***
c) FPI investors ***do not have any intention of exercising voting power*** or controlling or managing the affairs of the Company in whose securities they invest. Generally, Voting Share is ***< 10%***
d) FPI ***is done*** mainly by individuals and institutions ***through the mechanism of Capital Market.***

Question 78: Describe the factors influencing foreign direct investments?
Answer:

1. ***Interdependency***-the increasing interdependence of national economies and the consequent trade relations and international industrial cooperation established among them
2. ***Economies of scale-*** desire to reap economies of large-scale operation arising from technological growth
3. ***Desire to control***-desire to procure a promising foreign firm to avoid future competition and the possible loss of export markets
4. ***Desire to control IPR-*** necessity to retain complete control over its trade patents and to ensure consistent quality and service or for creating monopolies in a global context
5. ***Optimal utilization*** of physical, human, financial and other resources

6. ***Penetration*** into the markets of those countries that have established import restrictions such as blanket bans, high customs duties or non-tariff barriers which make it difficult for the foreign firm to sell in the host-country market by *'getting behind the tariff wall'*.

7. ***Labour cost advantage-*** the existence of low relative wages in the host country because of relative labour abundance coupled with shortage and high cost of labour in capital exporting countries, especially when the production process is labour intensive.

Question 79: What are the factors in the host country that discourage inflow of foreign investments? (Write any 8-10 points)

Answer:

General	Macro-Economic Factors	Labour related	Law/ Governance related
⇨ Political instability ⇨ Poor infrastructure ⇨ Small size of market with lack of growth potential. ⇨ Poor track-record of investments	⇨ High rates of inflation ⇨ Exchange rate volatility ⇨ Low income levels and lower demand	⇨ Poor literacy and low labour skills, ⇨ Dominance of labour unions ⇨ Language barriers	⇨ Higher degree of No – Tariff barriers ⇨ Unfavorable tax regime ⇨ Law not favorable t IPR protection ⇨ Double taxation

Question 80: What are the benefits of FDI to host country?

1. ***Labour-*** Benefits of higher wages, better opportunities for employment and skill enhancement, increased productivity
2. ***Technology-*** FDI can accelerate growth and foster economic development by providing the much-needed capital, technological know-how, management skills and marketing methods and critical human capital skills in the form of managers and technicians.
3. ***Domestic Industry-*** Competitive Environment due to entry of Foreign Firms. Cost reducing and quality improving innovations.
4. ***Global Market-*** Foreign enterprises possessing marketing information with their global network of marketing promote the exports of developing countries.
5. ***Domestic resources-*** The resources will be utilised in most efficient manner such that they give maximum output. This happens because of use of advanced use to technology
6. ***Consumer*** **-** It is likely that foreign investments enter into industries in which scale economies can be realized so that consumer prices might be lowered which was not possible for domestic firms with available resources.

Question 81: What are the disadvantages of FDI to Host country?

Answer :

1. ***Labour*** **-** FDIs are likely to concentrate on capital-intensive methods of production and service so that they need to hire only relatively few workers. Such technology is inappropriate for a labour-abundant country as it does not support generation of jobs
2. ***Monopoly-*** Foreign firms may also act as monopolists by exercising the power of deep pocket and wider coverage
3. ***Domestic resources*** **-** FDI is also held responsible by many for ruthless exploitation of natural resources and the possible environmental damage.
4. ***Technology*** - Often criticized of transferring outdated technology.
5. ***Domestic Industry*** - Decreasing competitiveness, detrimental to the long term interests.
6. ***Employment*** - If FDIs are concentrated towards capital-intensive methods, they will need only few workers. Such technology is inappropriate for labour-abundant country with high level of unemployment

Question 82: Write a note on foreign direct investment in India. (question may come on

any point separately)

Answer:

7. ***Background***: After the liberalization of the economy, India has been one of the highest Recipient Countries for FDI globally and is one of the top-ten most preferred investment destinations of the world.

1. Routes for FDI: An Indian Company can obtain FDI through-

Automatic Route- i.e. without any prior approval of the Government or RBI.

Approval Route- i.e. with prior approval of the Government.

2. ***Instruments***: FDI can be obtained through issue of "FDI – Compliant instruments" viz. Equity Shares, fully and mandatorily Convertible Preference Shares and Debentures, Partly Paid Equity Shares and Warrants, issued in accordance with the Companies Act 2013 and SEBI Guidelines, as applicable.

3. ***Repatriation***: All FDIs are repatriable (net of taxes) except- a) where the investment is made or held on non- repatriation basis, or b) where the sectorial condition specifically mentions non-repatriation.

4. ***Prohibition***: In India, Foreign Investment is prohibited in the following sectors-

i. Lottery Business including Government/ private Lottery, Online Lotteries etc
ii. Gambling and Betting including Casinos etc.
iii. Chit Funds
iv. Nidhi Company
v. Trading in Transferable Development Rights (TDRs)
vi. Real Estate Business or Construction of Farm Houses
vii. Manufacturing of cigars, Cheroots, Cigarillos and Cigarettes, of Tobacco or of Tobacco substitutes
viii. Activities / sectors not open to Private Sector Investment e.g. Atomic Energy and Railway Operations (other than permitted activities)

5. ***Overseas Direct Investment by Indian Business:*** There has been progressive relaxation of the capital controls and simplification of procedures for outbound investments from India. As a result, Outbound Foreign Direct Investments (OFDIs) from India have undergone substantial increase in terms of size, geographical spread and sectorial composition. At present any Indian Investor can make OFDI in any bonafide activity except in certain Real Estate activities.

Question 83: Distinguish between Foreign Direct Investment and Foreign Institutional Investment?

Answer:

Investment Type	Investment involves creation of ***physical /real*** assets	Investment is only in ***financial/ Nominal*** assets
Term	Has a ***long-term interest*** and therefore remain invested for long	*Only* ***short-term interest*** and generally remain invested for short periods
Difficulty in capital withdrawal	Relatively ***difficult*** to withdraw	Relatively ***easy*** to withdraw
Nature	***Not*** inclined to be ***speculative***	***Speculative*** in nature
Technology	Often accompanied *by* ***technology transfer***	***Not*** accompanied by ***technology transfer***
Impact on employment	***Directimpact*** on employment of labour and wages	***No direct impact*** on employment of labour and wages
Voting %	`=>10%	<10%

Control & Mgmt.	FDI takes place for **lasting interest and control.**	No interest in Management or Control.
Influence	**Significant** degree of influence by the Investor on the management of the acquired Enterprise.	Purely Financial Investment. **No** significant degree of **influence** on the Entity's management.

Unit 5- Foreign Exchange

Question 84: Define Exchange Rate.
Answer: The ***price of one currency expressed in terms of units another currency and represents number of units of one currency that can be exchanged for one unit of another currency.*** E.g. Rs. 67 per dollar is an exchange rate between rupee and dollar.

Question 85: What do you understand by term Cross Rate?
Answer: ***There may be two pairs of currencies with one currency being common between the two pairs.*** For instance, exchange rates may be given between a pair, X and Y and another pair, X and Z. The rate between Y and Z is derived from the given rates of the two pairs (X and Y, and, X and Z) and is called 'cross rate'

Question 86: What is an exchange rate regime?
Answer: An exchange rate regime is the ***system by which a country manages its currency in respect to foreign currencies.***

Question 87: Which are the major types of exchange rate regime?
Answer: There are two major types of exchange rate regimes at the extreme ends; namely:
(i) ***Floating*** exchange rate regime (also called a flexible exchange rate), and
(ii) ***Fixed*** exchange rate regime

Question 88: Define fixed exchange rate.
Answer: A fixed exchange rate, also referred to as " pegged exchange rate', is an exchange rate regime under which a ***country's central bank and/ government announces or decrees*** what its currency will be worth in terms of either another country's currency or a basket of currencies or another measure of value, such as gold.

Question 89: Explain the term 'real exchange rate'.
Answer: The 'real exchange rate' describes ***'how many' of a good or service in one country can be traded for 'one' of that good or service in a foreign country.***
Real exchange rate (R) = (nominal exchange rate x Foreign price) / (domestic price).

Question 90: Define Real Effective Exchange Rate (REER).
Answer: A Real Effective Exchange Rate (REER) is the ***nominal effective exchange rate*** (a ***measure of the value of a domestic currency against a weighted average of various foreign currencies) divided by a price deflator or index of costs.***

Question 91: What does increase in Real Effective Exchange Rate (REER) implies?
Answer: An increase in ***REER implies that exports become more expensive and imports become cheaper.*** Therefore, an increase in REER indicates a ***loss*** in trade competitiveness.

Question 92: Mention the types of transactions in the forex market?
Answer: There are two types of transactions in forex market; current transaction which are carried out in the ***spot market*** and contracts to buy or sell currencies for future delivery which are carried out in ***forward and future markets.***

Question 93: What is meant by devaluation?
Answer: ***Deliberate downward adjustment in the value of a country's currency relative to another currency, group of currencies or standard.*** It is a monetary policy tool used by countries that have a fixed exchange rate or nearly fixed exchange rate regime and involves a discrete official reduction in the otherwise fixed par value of a currency.

Question 94: What is Arbitrage? What is the outcome of Arbitrage?
Answer:
1. Arbitrage refers to the ***practice of making risk-less profits by intelligently exploiting price differences of an asset at different dealing places.***
2. When price differences occur in different markets, Market Participants will purchase Asset in a low – priced market, for re-sale in a high- priced market and make profit in this process
3. Outcome of Arbitrage: On account of arbitrage, ***regardless of physical location, at any given moment, all markets tend to have the same exchange rate for a given currency.***

Question 95: Distinguish between fixed exchange rate and floating exchange rate? What are the merits and demerits of each?
Answer:

Point	Floating Exchange rate Regime	Fixed Exchange Rate Regime
Determin-ation (Separate question is asked on this point)	1. The equilibrium value of the exchange rate of a country's currency is a ***market-determined*** i.e. the ***demand for and supply*** of currency relative to other currencies determine the exchange rate. 2. There is no predetermined target rate and the exchange rates are likely to change at every moment. 3. There is no interference on the part of the government or the central bank of the country in the determination of exchange rate.	1. ***A fixed exchange rate***, also referred to as ***pegged*** exchanged rate, is an exchange rate regime under which a ***country's Central Bank and/or government announces or decrees*** what its currency will be worth in terms of either another country's currency or a basket of currencies or another measure of value, such as gold. 2. In order to sustain a fixed exchange rate, it is not enough that a country pronounces a fixed parity: it must also make concentrated efforts to defend that parity by being willing to buy (or sell) foreign reserves whenever the market demand for foreign currency is lesser (or greater) than the supply of foreign currency
Stability in Rate	Rate keeps on changing based on market factors.	Rate generally remains stable and only a small variation is possible.
Merits	i. A floating exchange rate allows Central bank and /or government to pursue its own independent monetary policy ii. Floating exchange rate regime allows exchange rate to be used	i. Ensures stability and increase in Foreign Trade and Capital movements. ii. Avoids Currency fluctuations and eliminates Exchange Rate Risks thus smoothens international flow

	as a policy tool: for example, policy-makers can adjust the nominal exchange rate to influence the competitiveness of the tradeable goods sector iii. The central bank is not required to maintain a huge foreign exchange reserve.	of trade and investments. iii. Imposes discipline on a Country's Central Bank and/or Govt., and thereby generates lower levels of inflation. iv. Enhances the credibility of the Country's Monetary Policy.
Demerits	i. Volatile exchange rates generate a lot of uncertainties in relation to international transactions. ii. It adds risk premium to the costs of goods and assets traded across borders.	i. The Central Bank and/or Government has to maintain large reserves of Foreign Currencies, to maintain the Exchange rate at the level fixed by it. ii. Market Forces of Demand and Supply have no role in determination of Equilibrium FX Rate.

Question 96: What are the characteristic features of foreign exchange market?

Answer:

The features of foreign exchange markets are-

1. It is ***a wide-reaching market*** and operates ***worldwide.***
2. It is ***largest market in the world*** in terms of cash value traded.
3. It is an ***Over-the-Counter market*** and not a physical place as such. (OTC)
4. There is ***no central trading location*** and ***no set hours*** of trading.
5. Market participants who demand and supply currencies represent themselves through their Banks and Key Forex Dealers who respond to market signals transmitted instantly across the world.
6. Forex Market operates on ***very narrow spreads*** between buying & selling prices.

Question 97: What are the different roles played by the participants in the foreign exchange market?

Answer:

The different roles played by participants are:

1) ***Central Banks*** – a) to contain the volatility of exchange rate to avoid sudden and large appreciation or depreciation of Domestic Currency and b) to maintain stability in exchange rate in keeping with the requirements of national economy.
2) ***Commercial Banks***- either a) for their clients (as Agent), or b) on their own account – i) as speculators, ii) Arbitrageurs, or iii) both.
3) ***Governments*** – to purchase or sell forex with the same aims as that of the Central Banks as above,
4) ***Foreign Exchange Dealers*** – as Intermediaries between different dealers or banks,
5) ***Multinational Firms*** engaged in International Trade and investments – as part of their forex transactions,
6) ***Non – Bank Financial Institutions*** like Asset Management Firms, Insurance Companies, Brokers,
7) ***Arbitrageurs and Speculators*** –
   - Speculators (Bulls or Bears) are deliberate risk – takers who participate in the market to make gains which result in unanticipated changes in Exchange Rates.
   - Arbitrageurs earn profit by identifying price differences between pairs of currencies with different dealers or Banks.

Question 98: What do you understand by appreciation and depreciation of currency? How do they affect real economy?
Answer:

	Depreciation of Currency	**Appreciation of Currency**
Meaning	A currency is said to have appreciated if ***one is able to purchase 'more' of other currency against it after appreciation.*** It means that one is able to get more of rupees (here Re. 1 more) for same value of dollar (i.e. $ 1) after appreciation.	A currency is said to have depreciated if one is able to ***purchase 'less' of other currency against it after depreciation.*** It means that one is able to get less of Rupees (here Re.1 less) for same value of dollar (i.e. $1) after depreciation. Here dollar has depreciated.
Effect	The home currency becomes ***relatively less valuable.***	The Home currency becomes ***relatively more valuable.***
Example	Suppose 72/ US $ becomes 75/ US $. This is called Depreciation of Indian Rupee, and Appreciation of the US Dollar.	Suppose 72/ US $ becomes 69/ US $. This is called Appreciation of Indian Rupee, and Depreciation of the US Dollar.

Question 99: Distinguish between Direct Quote and Indirect Quote.
Answer:

Point	**Direct Quote**	**Indirect Quote**
Meaning	A Direct Quote is the number of units of a Local Currency exchangeable for ***one unit of a Foreign Currency.***	An Indirect Quote is the number of units of a Foreign Currency exchangeable for ***one unit of local Currency.***
Also known as	European Currency Quotation	American Currency Quotation
Base Currency	Foreign Currency (i.e. Rupee in the above case)	Local Currency (i.e. US $ in the above case)
Counter Currency	Local Currency (i.e. US $ in the above case)	Foreign Currency (i.e. Rupee in the above case)
Example	Rs. 67/ US $ means 67 is required to buy 1	$ 0.0143 per Rupee means 1 is obtained by selling $ 0.0143

Question 100: Explain the nature of changes in Exchange Rates and their impact on real economy? (Any point can be asked individually or if question is asked directly, not mentioning about any point specifically, then write two points for Appreciation and depreciation)
Answer:

	Home Currency Depreciation	**Home Currency Appreciation**
Exports	Depreciation lowers the relative price of a country's exports. Foreigners find that the country's exports are cheaper, and Export Demand increases.	Appreciation increases the relative price of a country's exports. Foreigners pay more for the country's products, export demand decreases.
Imports	Domestic residents and Importers have to pay more Home Currency on importing products. Demand for Imports decreases.	Domestic consumers pay less for foreign products. The demand for Imports increases.

Domestic Inflation	If imported goods are a significant portion of the domestic consumption, there will be Inflation. If Imported Inputs are used in production of Final Goods, there will be Cost Push Inflation.	If imported goods are significant portion of the domestic consumption there will be reduction in inflation levels.
Domestic Demand	Depreciation increases the price of Imports in relation to goods produced in the home country, and diverts spending from Foreign Goods to Domestic Goods. Increased demand, both for domestic import – competing goods & for exports, encourages economic activity and created output Expansion.	Appreciation decreases the price of Imports in relation to goods produced in home country, and diverts spending from Domestic Goods to Foreign Goods. Increased demand for foreign goods discourages economic activity and creates output Contraction.
Factor Mobility	Production for exports and of import substitutes becomes more profitable. So, factors of Production will be induced to move into the tradable goods sectors and out of the non-tradable goods sectors.	Factors of Production will be induced to move into the non – tradable goods sector and out of the tradable goods sectors. This is due to reduction in demand for Exports and imports becoming cheaper.
Wage Levels	If Export Sector is labour oriented, increased demand leads to higher employment and income levels.	If Export sector is Labour oriented, drop in demand leads to lower employment and income levels.
Trade Balance	By lowering export prices, currency depreciation increases the global competitiveness of Domestic Firms, increases the volume of exports and promotes trade balance.	By increasing Export prices, Currency appreciation leads to reduction in volume of exports and distorts the trade balance.
Foreign Currency Debt	On Foreign Currency denominated debts of Business firms or Government, the Interest and Principal payout will be higher.	On foreign currency denominated debts of Business Firms or Government, the Interest and Principal payout will be lower, leading to savings.
Profits of business firms	Export oriented sector, (e.g. IT, Gems, Jewellery, Textiles etc.) make higher profits due to higher Domestic Currency inflows, for every unit of Foreign Currency.	Export oriented sector get lower domestic currency inflows, for every unit of Foreign Currency. Sectors which import Inputs / Components pay less for their purchases and save costs.
Inward Remittances	A remittance to homeland by Non-Residents and Businesses abroad fetches more in terms of Domestic Currency. Depreciation increases such inflows.	Such remittances to homeland by Non Residents and businesses abroad are less in amount in terms of Domestic Currency.
Current Account Balance	If Export earnings rise faster than the Import Spending, then Current Account will improve. However, the impact will not be substantial if export volumes do not increase to a reasonable level.	Increasing imports and declining Exports cause larger deficits and worsen the Current Account balance. However, inelastic demand for and exports may sometimes lead to an improvement in the Current Account position.

Question 101: 'Flexible exchange rates reflect the true fiscal health of the economy' Elucidate.

Answer: The fiscal health of a country whose currency depreciates is likely to be affected with rising export earnings and falling import payments and consequent impact on current account balance. A widening current account deficit is a danger signal as far as growth prospects of overall economy is concerned. If export earnings rise faster than the imports spending then current account will improve otherwise not. Foreign investors are likely to be uncertain or highly cautious before investing in a country which has high exchange rate volatility. Foreign capital inflows are characteristically vulnerable when local currency weakens. Therefore, foreign portfolio investment flows into debt and equity as well as foreign direct investment flows are likely to shrink. This shoots up the capital account deficit affecting the country's scale withdrawal of portfolio investments and huge redemptions through global exchange traded funds leading to further depreciation of domestic currency. This may result in a highly volatile domestic equity market affecting the confidence of domestic investors. Reduced foreign investments also widen the gap between investments required for growth and actual investments.

Question 102: What is objective behind limiting protection of tariffs only? How does it promote international trade?

Answer: Limiting protection by tariffs is important for promoting international trade because protection by tariff leads to following disadvantages to international trade like:

a) Many developed countries practically adopt a "protectionist agenda" and deny effective markets access to less developed countries (LDCs). As a result LDCs seek regional alternatives instead of counting with WTO.
b) High Tariffs of selected products in many market cripple the export opportunities of LDCs.
c) Escalated tariff scheme; (i.e. importing country protects its own domestic processing industry by having lower tariffs on raw materials, and higher duties on finished goods), leads only to a scenario where LDCs are forced to export raw materials, without making value addition. By limiting or removing protection by tariffs, thus we can promote international Trade.

APPLICATION ORIENTED QUESTIONS

The price Index for exports in Country A in the year 2012 (2000 base-year), was 116.1 and the price index for country A's imports was 120.2 (2000-base year)

i. What do these figures mean?

ii. Calculate index of terms of trade for Country A.

iii. How do you interpret the index of terms of trade for Country A?

Solution:

i. The price index for exports of Country A in year 2012 (2000 base year), was 116.1 means that compared to year 2000, its export prices were 16.2 percent above the 2000 base year prices.

ii. The price index for country A's imports was 120.2 in year 2012 (2000 base- year), means that compared to year 2000, its import prices were 20.2 percent above the 2000 base year prices.

iii. The index of terms of trade for Country A in 2012 would be calculated as follows:

Terms of Trade = (Price of Country's exports/ Price index of imports)*100
= (116.1/ 120.2) * 100
= 96.6

iv. "Terms of Trade' is ratio of the price of a country's export commodity to the price of its import commodity. The figure 96.6 means that each unit of country A's exports in 2012 exchanged for 3.4 percent (3.4 = 100 – 96.6) fewer units of imports than in the base year.

The table below shows the number of labour hours required to produce wheat and cloth in two countries X and Y.

Commodity	Country X	Country Y
I unit of Cloth	4	1.0
I unit of Wheat	2	2.5

i. Compare the productivity of labour in both countries in respect of both commodities

ii. Which country has absolute advantage in the production of wheat?
iii. Which country has absolute advantage in the production of cloth?
iv. If there is trade, which commodity should these countries produce?
v. What are the opportunity costs of each commodity?

Solution:

i. Productivity of labour in both countries in respect of both commodities

Productivity of Labour	Country X	Country Y
Units of cloth per hour	0.25	1.0
Units of Wheat per hour	0.5	0.4

ii. Country X has absolute advantage in the production of wheat because productivity of wheat is higher in country X, or conversely, the number of labour hours required to produce wheat in country X is less compared to country Y

iii. Country Y has absolute advantage in the production of cloth because productivity of cloth is higher in country Y, or conversely, the number of labour hours required to produce wheat in Country Y is less compared to Country X.

iv. In Country X, the opportunity cost is 0.25 units of cloth for 0.5 unit of wheat.

v. In country Y, the opportunity cost is 0.4 units of wheat for 1 unit of cloth.

The following table gives you the output capacity of two products in two countries

1 unit of the Product requires	**Product A**	**Product B**
Country P	8 Hours	9 hours
Country Q	12 Hours	3 hours

1. **Compute the Production per hour for both products in both countries.**
2. **Is the Theory of Absolute Advantage applicable in the above case?**
3. **If your answer to part 2 is in the affirmative, which country has Absolute Advantage for – a) Product A, b) Product B?**
4. **If trade takes place between these countries, which product should each country produce?**
5. **What is the Opportunity Cost of each product?**

SOLUTION:

The table given in the question can be written in the form of Production per hour as under-

	Product A	Product B
Country P	0.125 units per hour	0.11 units per hour
Country Q	0.083 units per hour	0.33 units per hour

Since 0.125 > 0.083, and 0.11 < 0.33 i.e each country has absolute advantage over another country in one commodity each, the Theory of Absolute Advantage is applicable in this case.
Country P has absolute Advantage in "A" , 0.125 > 0.083 and Country Q has Absolute Advantage in "B", 0.33 > 0.11
If International Trade takes place, country P will produce "A", and Country Q will produce "B".
Opportunity cost of each product is as under-
Country P : 0.11 units of "A" for 0.125 units of "B"
Country Q: 0.083 units of "A" for 0.33 units of "B"

. (i) Which of the three exporters engage in anti competitive act in the international market while pricing its export of good X to Country D?
(ii) What would be the effect of such pricing on the domestic producers of good X? Advise remedy available for Country D?

Goods X	Country A (in $)	Country B (in $)	Country C (in $)
Average Cost	30.5	29.4	30.9
Price per unit for domestic sales	31.2	31.1	30.9
Price charged in Country D	31.9	30.6	30.6

Solution:

(i) Dumping by Country B and Country C. B because it sells at a lower price than that in domestic market; Country C because it is selling at a price which is less than the average cost of production.

(ii) Adverse effects on domestic industry as they will lose competitiveness in their markets due to

unfair practice of dumping. Country D may prove damage to domestic industries and charge anti-dumping duties on goods imported form Country B and Country C so as to raise the price and make it par which similar goods produced by domestic firms.

. (i) what do you think the implications on trade will be if India pays an export subsidy of Rs. 400/ on every pair of cotton trousers exported by it to Germany

(ii) Suppose Germany charged an equivalent countervailing duty on every pair of cotton trousers imported from India. Do you think world welfare will be affected?

Solution:

(i) Unfair and artificially created price advantage to trousers exporters of India – price does not reflect costs- German trousers industry lose competitiveness and market share as trousers form India are lower priced- Loss of world welfare. German industry can ask for protection by introducing countervailing duties.

(ii) An equivalent countervailing duty will push the prices of Indian trousers and afford protection to domestic trousers industry. World welfare will be same as before India introduced export subsidy.

India aims to become a global leader in solar energy and for achieving this; the Jawaharlal Nehru National Solar Mission (JNNSM) was launched in 2010. To persuade and to promote producers to participate in the national solar programme, the government planned long-term power purchase agreements with solar power producers, thus effectively guaranteeing the sale of the energy produced as well as the price that solar power producers could obtain. However, there was a stipulation that the producers should use domestically sourced inputs, namely solar cells and modules. India lost the case in DSB and WTO has ruled against the stipulation of local content requirements by government of India.

Answer the following questions:

(i) How does the 'local content requirements' clause violate the WTO agreements?

(ii) Do you think Indian domestic solar power industry will be affected when India scraps the local-sourcing regulation as per the ruling of WTO?

Solution:

(i) Local sourcing regulation is considered as a protectionist measure inconsistent with India' international obligations under WTO agreement. Discrimination on the basis of the national 'origin' of the cells and modules is a violation of its trade commitment for 'national treatment obligation' under WTO. If the objective is cost reduction and efficiency then the solar power producers should be free to choose energy-generation equipments and components on the basis of price and quality, irrespective of whether they are manufactured locally or not. By mandatorily requiring solar power producers to buy locally, the government has, it is argued, tried to distort competition. This imposes extra cost, and may possibly be passed on to final consumers. Therefore, the interests of the consumers will not be protected.

(ii) The market forces would prevail in respect of solar energy production- the import competing domestic industry of solar panels and modules may face stiff competition from imported items, especially those from China. Indian solar industry is in its infancy. Possibility of subsidized imports and dumping from different countries. India can evoke anti-dumping duties, countervailing duties and safe guards as provided for in WTO agreements. Need for innovation, cost reduction and quality improvement of Indian solar industry to compete with global manufacturers. Since clean energy is a merit good, government may produce and supply it directly – economies of large scale production can be reaped leading to cost and price reduction.

. Explain the implications of the following on the demand and supply of foreign exchange and the exchange rate in spot foreign exchange market.

(i) Sherry Land's exports remained more or less stagnant in the years 2005 – 06 to 2016-17. However, due to heavy thrust on industrialization, import of machinery, raw materials and components as well as associated services of different types increased.

(ii) The investors of Merry Land find investments in financial assets in UK highly attractive and the government of Merry Land which has a liberal attitude on foreign investments permits such investments.

(iii) Many foreign investors who had previously acquired Roseland's financial assets sell them

(iv) Effect on Country Y if Country X borrows $100 billion form Country Y

Solution:

(i)Higher demand in Sherry Land for Foreign exchange (say $) to make development imports for industrialization; coupled with no proportionate increase in supply on account of meager inflow of

foreign exchange consequent on stagnant exports for more than a decade, lead to rise in exchange rate and depreciation in the value of domestic currency.

(ii) Increased demand for foreign exchange in Australia; the domestic currency depreciates.

(iii) Increased demand for foreign exchange; Roseland's domestic currency depreciates

(iv) International capital outflow; demand for foreign currency-outflow of foreign exchange, depreciation of domestic currency.

Explain how the exchange value of Indian Rupee will be affected in each of the following cases. What are the possible consequences on exports and imports?

(i) The spot exchange rate changes from Rs. 61/1$ to Rs. 64/1$

(ii) The spot exchange rate changes from Rs. 66/1$ to Rs. 63/1$

Solution:

(i) The spot exchange rate changes from Rs. 61/ 1$ to Rs. 64/1$. It implies depreciation of Rupee and appreciation of Dollar. Exports become cheaper and more attractive to foreigners; imports will be discouraged as they become costlier to import.

(ii) The spot exchange rate changes from Rs.66/ 1$ to Rs. 63/ 1$. This means that Rupee has appreciated in value and dollar has depreciated. Exports become costlier and so demand for Indian exports may fall; imports become cheaper.

. In 1983 Australia decided to float its dollar. Assuming free trade, explain effects of each of the following on the spot exchange rate between AUD and USD.

(i) There is substantial increase in demand in Australia for US exports of services. Since Australia manufactures were favoured over others, there is proportionate increase in exports of Australian products to the US

(ii) Investors in Australia perceive that the returns on investments in the US would be much more lucrative than elsewhere. As a result there is huge increase in demand for investments in US dollar denominated financial investments

(iii) Political uncertainties in the US due to presidential elections caused large scale shift of Australian financial investments back in to Australia.

(iv) An epidemic in some parts of Australia made the US evoke SPS measures and ban the entry of a number of food items to the US

Solution:

(i) The spot exchange rate between AUD and USD will not be affected as increased demand for foreign currency in each country will be matched by a proportionate increase in supply of foreign exchange.

(ii) Investors in Australia would demand more USD for making dollar denominated financial investments in the US. Supply of US dollars remaining the same, being in floating rate, AUD will depreciate and USD will appreciate.

(iii) Large scale shift of Australian financial investments back to home due to political uncertainties in the US would result in large scale sale of financial assets and capital outflow from the US. This will lead to more inflow of US dollars to Australia and demand remaining the same, depreciation in the value of USD viz a viz AUD.

(iv) Ban of Exports to the US reduces USD inflows to Australia; demand for USD remaining same, AUD may depreciate.

Which of the following is a FDI?

1. **Claram Joe, a German investor buys 5000 shares of Ford, a US Automobile company.**
2. **Annette D, the US Company acquires all the equity shares of Emeline & Co. in Alice Land which makes computer components.**
3. **A Bulgarian investor Boryana Gergiev pays cash and buys 0.2% of all outstanding equity shares of Mariette company which makes computer peripherals**
4. **Maansi Tech solutions purchase 52% stake in a Sarra, a Jamaican technology firm**
5. **Kora extends a loan to Christa Victorine, a powder producing firm in which it holds 60% equity**
6. **Augusta Corp lends pounds 10 million to Lee Sud, a Dutch parts making firm in which it holds 79% of equity**
7. **Labour group in your country oppose the flow of FDI into the country on grounds perceived inequities consequent on FDI. What are their arguments?**
8. **Beth & Sushil are members of the committee for the resolution of the issue cited under what arguments would they put forth to convince the labour groups of the welfare**

implications for labour that may arise from FDI?

Solution:

(i) Not FDI because less than 10% (which is the globally accepted criterion)

(ii) FDI since 100 percent shares are bought

(iii) Not FDI because an insignificant part of the total stake is acquired.

(iv) FDI because it involves more than 10% of the company's shares

(v) FDI lending to a company in which Kora has majority stake

(vi) FDI lending to a company in which Augusta Corp has majority stake

(vii) Foreign corporate concentrate on capital-intensive methods of production- so they need to hire only relatively few workers, technology inappropriate for labour abundant country- does not support generation of jobs. FDI may not be realized in reality – may resort to anti-ethical, and anticompetitive practices- 'off-shoring', or shifting jobs – negative effects on employment potential of home country – continuance of lower labour or environmental standards and ruthless labour and natural resources exploitation.

(viii) FDI will - accelerate growth and foster economic development- bring in technological know-how, management skills and marketing methods- generate direct employment in the recipient country- subsequent FDI as well as domestic investments propelled in the downstream and upstream projects that come up in multitude of other services generate multiplier effects on employment and income – generate indirect employment opportunities – promote relatively higher wages for skilled jobs- more indirect employment will be generated to persons in the lower-end services sector occupations thereby catering to an extent even to the less educated and unskilled engaged in those units. Better work culture and higher productivity standards- induce productivity related awareness and may also contribute to overall human resource development.

Q3) Answer the same question using the new information given below.

Commodity	Country A	Country B
Wheat (bushels/hour)	6	1
Cloth (yards/hour)	4	5

Q4. The price index for exports of Country A in year 2012 (2000 base-year), was 116.1 means that compared to year 2000, its export prices were 16.1 percent above the 2000 base year prices.

1. *What do these figures mean?*
2. *Calculate the index of terms of trade for country A?*
3. *How do you interpret the index of terms of trade for country A?*

A. Term of trade = $\frac{\text{price of country's export}}{\text{Price index of its import}} \times 100 = 96.6$

(Terms of trade" is ratio of the price of a country's export commodity to the price of its import commodity. The figure 96.6 means that each unit of country A's exports in 2012 exchanged for 3.4 percent (3.4 = 100 - 96.6) fewer units of imports than in the base year)