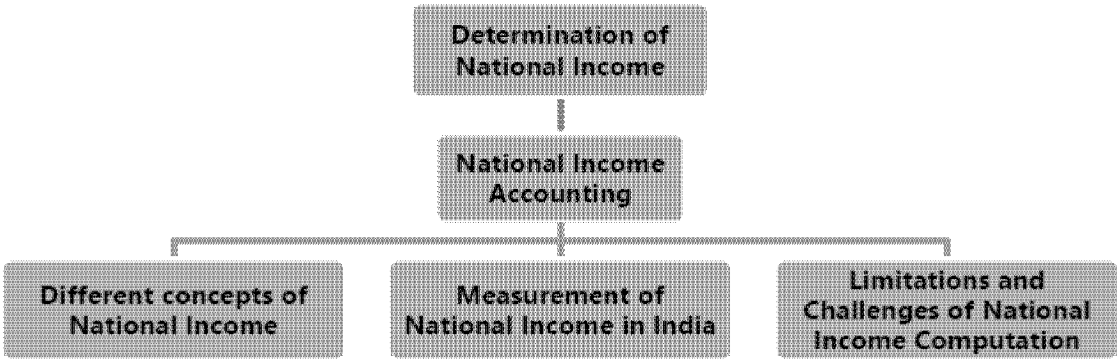
4. NATIONAL INCOME ACCOUNTING



Q.No.1. Define the term National Income. (B) (SM, RTP M18)

National Income is defined as 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 (NFIA).

According to the Central Statistical Organisation (CSO) 'National income 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'.

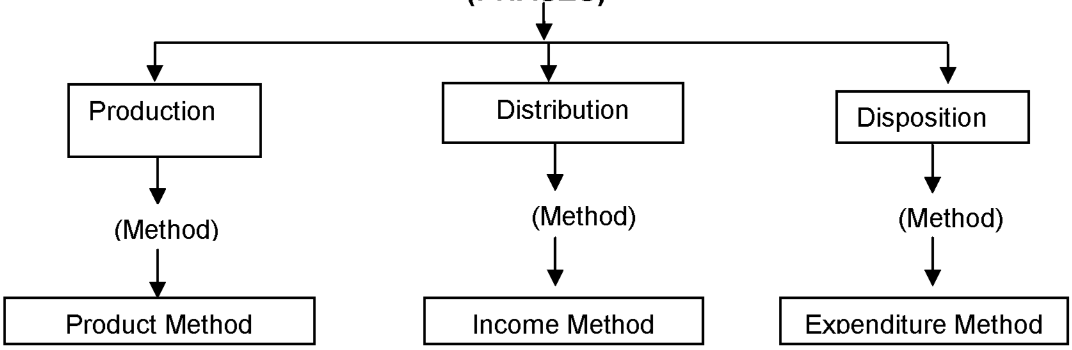
Q.No.2. Explain the three different sides of National Income accounts? (B) (SM)

Introduction: United Nations (UN) has developed a System of National Accounts (SNA) to provide a comprehensive conceptual and accounting framework for compiling and reporting macro-economic statistics for analysing and evaluating the performance of an economy.

The basic concepts and definition terms used in national accounts largely follow SNA. Each of the concepts has a specific meaning, use and method of measurement.

MEASUREMENT OF NI ACCOUNTS

(PHASES)



National income accounts have three sides namely product side, an income side and an expenditure side.

The product side measures production based on the concept of value added. The widely reported measures of overall production are Gross Domestic Product (GDP) and Gross National Product (GNP).

The income side measures the distribution of the proceeds from sales to different factors of production. It is the total flow of earnings of the factor owners (the residents of a country) who receive through the production of goods and services in the form of wages, salaries, rent, interest and profits.

The expenditure side considers the final sales of goods and services.

SIMILAR QUESTIONS:

1. **What function does the System of National Accounts (SNA) serve in the computation of National Income?**

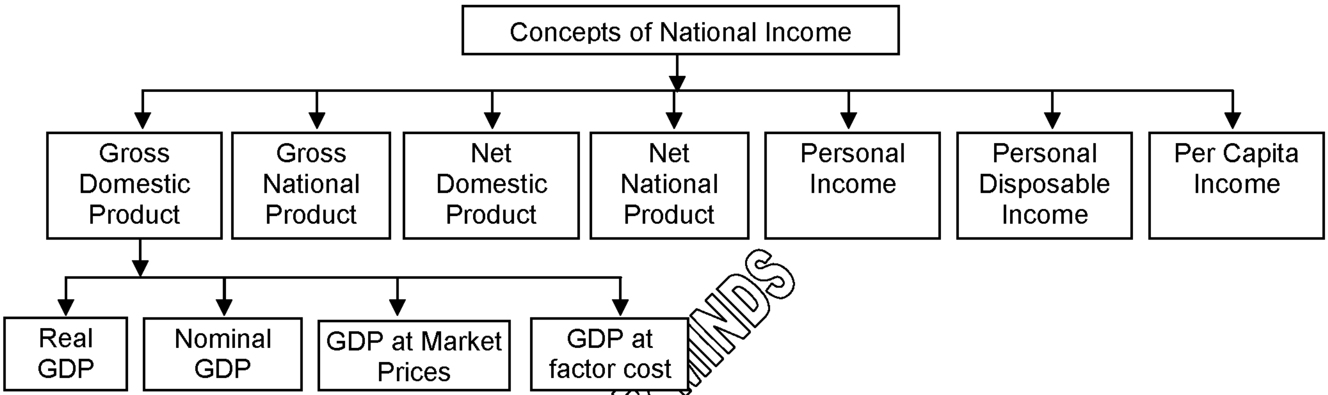
A. Refer Introduction

2. **What are the two widely reported measures of overall production on the product side based on the concept of value added?**

A. Among the three phases of National Income to measure overall production on the product side based on the concept of value added, the two widely reported measures are Gross Domestic Product (GDP) and Gross National Product (GNP).

Q.No.3. Explain the various concepts of National Income. (A) (SM)

The basic concepts and definition terms used in national accounts largely follow SNA.



Concepts of NI	Description
GDP (OR) GVA	**Gross Domestic Product (GDP) or Gross Value Added:** • The term 'gross' implies that GDP is measured 'gross' of depreciation. • 'Domestic' means domestic territory or resident production units. • Value added means the difference between value of output and purchase of intermediate goods. It represents the contribution of labour and capital to the production process. **Definition:** GDP is a measure of the market value of all final economic goods and services, gross of depreciation, produced within the domestic territory of a country during a given time period. **(Or)** GDP is the sum total of 'value added' by all producing units in the domestic territory and includes value added by current production by foreign residents or foreign-owned firms.
Real GDP	**GDP at Constant prices or Real GDP:** • It is the value of domestic product in terms of constant prices of a chosen base year. • Real GDP changes only when production changes.
Nominal GDP	**GDP at Current prices or Nominal GDP:** • It is the value of domestic product in terms of prevailing prices of a current year. • Nominal GDP changes when price changes.
GDP_{MP}	**Gross Domestic Product at market prices (GDP_{MP}):** GDP is in fact Gross Domestic Product at market prices (GDP_{MP}) because the value of goods and services is determined by the common measuring unit of money or it is evaluated at market prices.

	GDP_{MP} = Value of Output in the Domestic Territory - Value of Intermediate Consumption **= ∑ Value Added**
GDP_{FC}	**Gross Domestic Product at Factor Cost (GDP_{FC}):** The production and income approach measure the domestic product as the cost paid to the factors of production. Therefore, it is known as 'domestic product at factor cost'. • The basis of distinction between market price and factor cost is net indirect taxes (i.e., Indirect taxes - Subsidies). • Indirect taxes are **product taxes** (excise duties, customs, sales tax, service tax etc.,) and **taxes on production** (factory license fee, taxes to be paid to the local authorities, pollution tax etc.) • Market Price = Factor Cost + Net Indirect Taxes = Factor Cost + Indirect Taxes-Subsidies (Market price includes indirect taxes and excludes subsidies) • Factor Cost = Market Price - Net Indirect Taxes = Market Price - Indirect Taxes + Subsidies (Factor cost excludes indirect taxes and includes subsidies) **GDP_{FC} = GDP_{MP} - Indirect Taxes + Subsidies** **= Compensation of employees** **+ Operating Surplus (rent + interest + profit)** **+ Mixed Income of Self-employed + Depreciation**
GNP	**Gross National Product:** It is a measure of the market value of all final economic goods and services, gross of depreciation, produced with in the domestic territory of a country by normal residents during an accounting year including net factor incomes from abroad. **GNP_{MP} = GDP_{MP} + Net Factor Income from Abroad** **GDP_{MP} = GNP_{MP} - Net Factor Income from Abroad** • The distinction between 'national' and 'domestic' is net factor income from abroad (NFIA). **National = Domestic + Net Factor Income from Abroad (NFIA)** • NFIA = (The aggregate amount that a country's citizens and companies earn abroad) - (The aggregate amount that foreign citizens and overseas companies earn in that country). • If NFIA is positive, then GNP_{MP} > GDP_{MP}.
NDP_{MP}	**Net Domestic Product at market prices (NDP_{MP}):** It is a measure of the market value of all final economic goods and services, produced with in the domestic territory of a country by its normal residents and non-residents during an accounting year less depreciation. **NDP_{MP} = GDP_{MP} - Depreciation** **= NNP_{MP} - NFIA** The basis of distinction between 'gross' and 'net' is depreciation or consumption of fixed capital. **Gross = Net + Depreciation** **Net = Gross - Depreciation**

NDP_{FC}	**Net Domestic Product at Factor Cost (NDP_{FC}):** • It is defined as the total factor incomes earned by the factors of production. • It is sum of domestic factor incomes or domestic income net of depreciation. **NDP_{FC} = NDP_{MP} - Net Indirect Taxes.** **= Compensation of employees** **+ Operating Surplus (rent + interest + profit)** **+ Mixed Income of Self-employed**
NNP_{MP}	**Net National Product at Market Prices (NNP_{MP}):** It is a measure of the market value of all final economic goods and services, produced by normal residents with in the domestic territory of a country including NFIA during an accounting year excluding depreciation. **NNP_{MP} = GNP_{MP} - Depreciation** **= NDP_{MP} + Net Factor Income from Abroad** **= GDP_{MP} + Net Factor Income from Abroad - Depreciation**
NNP_{FC} or NI	**Net National Product at Factor Cost (NNP_{FC}) or National Income:** It is defined as the factor income accruing to the normal residents of the country during a year. • It is the sum of domestic factor income and net factor income from abroad. • National income is the value of factor income generated within the country plus factor income from abroad in an accounting year. **NNP_{FC} = National Income** **= FID (Factor income earned in domestic territory) + NFIA.** If NFIA is positive, then national income will be greater than domestic factor incomes.
PI	**Personal Income:** It is the income received by the household sector including Non-Profit Institutions serving households. It forms the basis for consumption expenditures and is derived from national income as follows: **PI = NI + income received but not earned - income earned but not received.** • Examples of **income received but not earned:** Transfer payments such as social security benefits (pensions), unemployment compensation, welfare payments etc. • Examples of **income earned but not received:** Undistributed corporate profits and the contribution of employers to social security. • NI is not the sum of personal incomes because personal income includes transfer payments which are excluded from NI.
DPI	**Disposable Personal Income:** It is a measure of amount of the money in the hands of the individuals that is available for their consumption or savings. DPI is derived from personal income by subtracting the direct taxes paid by individuals and other compulsory payments made to the government. **DPI = PI - Personal Income Taxes = Consumption + Savings** The Individual purchasing power in a country mainly depends upon his DPI.

PCI	**Per Capita Income (PCI):** 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. **Per capita Income** $= \frac{\text{National Income}}{\text{Total Population}}$

NOTE: Each concept will be expected as a separate Question. Also refer differences of the concerned concepts.

SIMILAR QUESTION:

1. **Define the terms a) GDP b) GDP_{MP} c) GDP_{FC} d) GNP e) NDP f) NNP_{FC} g) Personal Income h) Disposable income 9) Per capita income**

A. Write the explanation part of the concerned.

2. **Explain the concept of Gross National Product at Market Prices (GNP_{MP}). (N18 - 2M)**

A. Refer GNP

Q.No.4. Distinguish between Nominal GDP and Real GDP (or) Draw the basis of distinction between GDP at current and constant prices (or) Distinguish between GDP current and constant prices. What purpose does Real GDP serve? (B) (SM, RTP M18, MTP 2 M18)

The basic difference between the terms Real and Nominal is either inflation or deflation.

Nominal GDP	Real GDP
i) GDP in terms of current market prices is termed as 'Nominal GDP' or 'GDP at current prices'.	i) GDP in terms of constant prices of a chosen base year is termed as 'real GDP' or 'GDP at constant prices'.
ii) Nominal GDP which is essentially a quantity measure is sensitive to changes in the average price level.	ii) Real GDP changes only when production changes.
iii) Nominal GDP rise without any real increase in physical output.	iii) The real GDP when available by industry of origin, give a measure of the structural changes in the pattern of production in the country is vital for economic analysis.

Inference: If prices rise, GDP measured at market prices will also rise without any real increase in physical output. This is misleading because it does not reflect the changes in the actual volume of output. To correct this i.e. to eliminate the effect of prices, in addition to 'Nominal GDP', 'Real GDP' is introduced.

Q.No.5. Distinguish between GDP and GNP. (C) (SM)

The two concepts GNP and GDP differ in their treatment of international transactions (i.e. NFIA).

GROSS NATIONAL PRODUCT (GNP)	GROSS DOMESTIC PRODUCT (GDP)
i) The term 'national' refers to normal residents of a country who may be within or outside the domestic territory	i) The term 'domestic' refers to the domestic territory of the country.
ii) GNP is a broader concept than **GDP**	ii) GDP is a narrower concept than **GNP**
iii) GNP includes NFIA such as earnings of Indian corporations in overseas and Indian residents working in overseas	iii) GDP excludes NFIA (Net Factor Income from Abroad).

iv) GNP excludes earnings from current production in India that accrue to foreign residents or foreign-owned firms	**iv)** GDP includes earnings from current production in India that accrue to foreign residents or foreign-owned firms

For instance, profits earned by Company 'Y', an Indian company in UK would be excluded from GDP, but included in GNP. Similarly, profits earned in India by 'X' Company, a foreign-owned firm, would be included in GDP but not in GNP.

Q.No.6. Suggest what sort of Care is to be taken while calculating GDP. (B) (SM)

Gross Domestic Product (GDP): It is a measure of the market value of all final economic goods and services, gross of depreciation, produced within the domestic territory of a country during a given time period.

While calculating GDP we need to include the following values:

i) Only final goods and services,

ii) Only the value added by the production process,

iii) Goods and services which are produced in the current period,

iv) The net change in inventories of final goods,

v) Production boundary of GDP (i.e. production of agriculture, forestry and fishing which are used for own consumption of producers)

vi) Discounting for capital consumption or depreciation of the current year.

While calculating GDP we need to exclude the following values:

i) Intermediate goods used to produce other goods (Ex: Producer goods).

ii) Non-economic activities *e.g. services of family members that are done out of love and affection etc.*

iii) Market transactions such as exchange of goods which already exist or are previously produced (Ex: Second hand goods).

iv) Transfer payments (Ex: Pensions, scholarships, unemployment allowances etc.)

v) Financial transactions and un - reported output generated through illegal transactions such as narcotics and gambling (also known as 'bads' as opposed to 'goods' which GDP accounts for).

SIMILAR QUESTION:

1. What are the values to be included or excluded in the calculation of Gross Domestic Product?

A. Refer above answer

2. What are the inclusions and exclusions in calculating Gross Domestic Product (GDP)?

A. Refer above answer

Q.No.7. How National Income is measured in India? (B) (SM)

Measurement of National Income in India is done by National Accounts Statistics (NAS) in India

1. NAS in India is compiled by:

a) National Accounts Division in the Central Statistics Office (CSO),

b) Ministry of Statistics and Programme Implementation (MoSPI)

Publication of estimates: National Income estimates are done annually as well as quarterly. This publication is the key source-material for all macro-economic data of the country. As per the mandate of the Fiscal Responsibility and Budget Management Act 2003, the Ministry of Finance uses the GDP at current prices to determine the fiscal targets.

Amendments:

i) MoSPI has released the new series of national accounts, revising the base year from 2004-05 to 2011-12.

ii) In the revision of NAS done by CSO in January 2015, it was decided that sector-wise estimates of Gross Value Added (GVA) will now be given at basic prices instead of at factor cost.

(Basic price = Amount receivable by the producer from the purchaser for a unit of a product- Tax on the product + subsidy on the product.)

SIMILAR QUESTION:

1. What is the role of System of National Accounts Statistics (NAS) in India serve in measuring National Income?

A. Refer 1st and 2nd points

2. What are the recent amendments made by the System of National Accounts Statistics (NAS) in India in the calculation of National Income?

A. Refer 3rd point

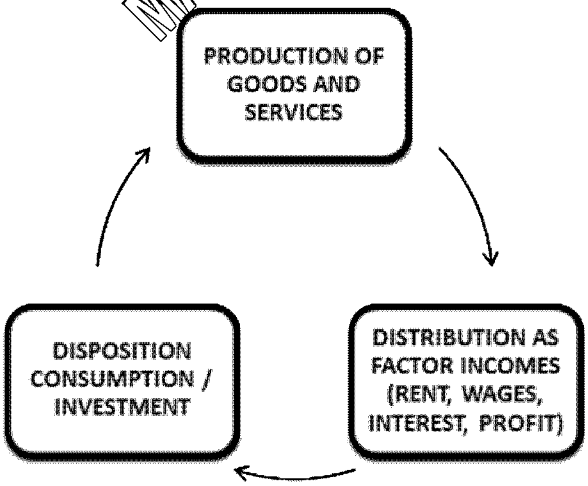
3. How the National Income data is used by the Indian Government in determining the fiscal targets?

A. Refer 2nd point.

Q.No.8. Illustrate the circular flow of income and describe its relevance in measurement of national income. (C) (SM)

The 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.



i) In the production phase, firms produce goods and services with the help of factor services.

ii) In the income or distribution phase, the flow of factor incomes in the form of rent, wages, interest and profits from firms to the households occurs

iii) In the expenditure or disposition phase, the income received by different factors of production is spent on consumption goods and services and investment goods. This expenditure leads to further production of goods and services and sustains the circular flow.

iv) These processes of production, distribution and disposition keep going on simultaneously and enable us to look at national income from three different angles namely: as a flow of production or value added, as a flow of income and as a flow of expenditure.

Q.No.9. Outline the different methods used in India to compute National Income and comment on it. (A) (SM)

Circular flow of income refers to the processes of production, distribution and disposition keep going on simultaneously and hence NI is stated in three different angles namely:

- As a flow of production,
- As a flow of income, and
- As a flow of expenditure.

Each of these different phases suggests a different method of calculation and requires a different set of data.

Data requirements and outcomes of Different methods of National Income Calculation

PHASE	METHOD	DATA REQUIRED	WHAT IS MEASURED	APPLICABILITY IN INDIA
Production	Net output method (or) Value added method (or) Product method (or) Industrial origin Method	The sum of net values added by all the producing enterprises of the country	Contribution from production units	Agricultural sector
Distribution	Income Method (or) Factor Income Method, (or) Factor Payment Method (or) Distributed Share Method	Total factor incomes generated in the production of goods and services	Relative contribution of factor owners	Small scale sector
Disposition	Expenditure Method (or) Income Disposal Approach (or) Outlay Method	Sum of expenditures of the three spending units in the economy, namely, government, households, and producing enterprises	Flow of consumption and investment expenditures	Construction sector

Comments:

- When NI of a country is measured separately using these methods, we get a three dimensional view of the economy.
- Income method may be most suitable for developed economies where people properly file their income tax returns.
- Countries like India are unable to estimate their national income wholly by one method.

SIMILAR QUESTION:

1. **Explain the data i.e. required as per the different methods to calculate national income**

A. Refer the (ii) and (iii) columns of tabular column

Q.No.10. Briefly explain Value Added Method or Product Method to calculate National Income in India. (A) (SM)

Value Added Method or Product Method:

a) Value Added Method is also called Industrial Origin Method or Net Output Method.

b) National income by value added method is the sum total of net value added at factor cost across all producing units of the economy.

c) The value added method measures the contribution of each producing enterprise in the domestic territory of the country in an accounting year

d) It considers totality of production of each industry and reduces intermediate purchases from all other industries.

This method involves the following steps:

Step 1: Identifying the producing enterprises and classifying them into different sectors according to the nature of their activities

a) All the producing enterprises are broadly classified into three main sectors namely: Primary sector, Secondary sector, and Tertiary sector or service sector

b) These sectors are further divided into sub-sectors and each sub-sector is further divided into commodity group or service-group.

Step 2: Estimating the gross value added (GVA_{MP}) by each producing enterprise

Gross value added (GVA_{MP}) = Value of output - Intermediate consumption
= (Sales + change in stock) - Intermediate consumption
= $\sum(GVA_{MP})$

Step 3: Estimation of National income

For each individual unit, Net value added is found out.

Net value added (NVA_{MP}) = $\sum(GVA_{MP})$ - Depreciation

a) Adding the net value-added by all the units in one sub-sector, we get the net value- added by the sub-sector.

b) By adding net value-added of all the sub- sectors of a sector, we get the value-added of that sector.

c) For the economy as a whole, we add the net products contributed by each sector to get NDP

d) We subtract net indirect taxes and add net factor income from abroad to get national income.

NVA_{FC} (or) (Net Domestic Product) = NVA_{MP} - Net Indirect taxes
National Income (NNP_{FC}) = NVA_{FC} + NFIA

The values of the following items are included:

i) Own account production of fixed assets by government, enterprises and households.

ii) Production for self-consumption, and

iii) Imputed rent of owner occupied houses.

SIMILAR QUESTIONS:

1. Explain "Value Added method" in computation of National Income

A. Refer first four points of "Value added" method side heading.

2. What are the steps involved in Calculating National Income by using "Value added method"?

A. Refer the three steps explained as above.

3. While calculating National income under value added method, what are the values to be included?

A. Refer the last side heading.

Q.No.11. Write about Income Method in the computation of National Income. (B) (SM)

Income Method:

Production is carried out by the combined effort of all factors of production. The factors are paid factor incomes for the services rendered.

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.

By definition, it includes factor payments to both residents and non-residents.

Thus, NDP_{FC}= Sum of factor incomes paid out by all production units within the domestic territory of a country

NNP_{FC} or National Income = Compensation of employees
+ Operating Surplus (rent + interest + profit)
+ Mixed Income of Self-employed
+ Net Factor Income from Abroad

The values of the following items are Included:

a) Only incomes earned by owners of primary factors of production (EX: Wages of labourers)

b) Labour income (wages and salaries, bonus, commission, employers' contribution to provident fund and compensations in kind.)

c) Non-labour income (EX: Dividends, undistributed profits of corporations before taxes, interest, rent, royalties and profits of unincorporated enterprises and of government enterprises.)

d) Mixed income includes all those incomes which are difficult to separate labour income from capital income (EX: agriculture, trade, transport etc. in underdeveloped countries including India)

The values of the following items are excluded:

a) Transfer incomes (EX: pensions of retired workers, unemployment allowances etc.)

b) Income from the sale of second hand goods

c) Illegal Incomes

SIMILAR QUESTIONS:

1. While calculating National income under Income method, What are the values to be included?

A. Refer "The values of the following items are Included"

2. While calculating National income under Income method, What are the values to be excluded?

A. Refer "The values of the following items are excluded"

Q.No.12. Write about Expenditure method in the computation of National Income. (B) (SM)

Expenditure Method:

In the expenditure approach, also called Income Disposal Approach, national income is the aggregate final expenditure in an economy during an accounting year.

In the expenditure approach to measuring GDP, we add up the value of the goods and services purchased by each type of final user mentioned below.

GDP_{MP} = Final consumption expenditure + Gross domestic capital formation + Net exports.

1. **Final Consumption Expenditure:**

   a) **Private Final Consumption Expenditure (PFCE):**

   To measure this, the volume of final sales of goods and services to consumer households and nonprofit institutions serving households are multiplied by market prices and then summation is done.

   It includes:

   i) Only expenditure on final goods and services produced in the accounting period.

   ii) The value of primary products (produced for own consumption by the households).

   iii) Payments for domestic services which one household renders to another.

   iv) The net expenditure on foreign financial assets or net foreign investment.

   It excludes:

   i) Land and residential buildings purchased or constructed by households

   b) **Government Final Consumption Expenditure:**

   i) The collective services provided by the governments such as defence, education, health care etc. are valued in money terms. This total expenditure is treated as consumption expenditure of the government.

   ii) Government expenditure on pensions, scholarships, unemployment allowance etc. should be excluded because these are transfer payments.

2. **Gross Domestic Capital formation:**

   Gross domestic fixed capital formation includes,

   i) Final expenditure on machinery and equipment

   ii) Own account production of machinery and equipment,

   iii) Expenditure on construction (Land and residential buildings constructed by households),

   iv) Expenditure on changes in inventories,

   v) Expenditure on the acquisition of valuables such as, jewelry and works of art.

3. **Net Exports:**

   i) Net exports are the difference between exports and imports of a country during an accounting year.

   ii) It can be positive or negative.

   National income or NNP_{FC} using expenditure method:

GDP_{MP} = Final consumption expenditure + Gross domestic capital formation + Net exports.
$GNP_{MP} = GDP_{MP} + NFIA$
$GNP_{FC} = GNP_{MP}$ - Net indirect taxes
National income or $NNP_{FC} = GNP_{FC}$ - Depreciation

SIMILAR QUESTIONS:

1. **Define Expenditure method and what are the topics included in calculation of national income under this method?**

A. Refer introduction up to formula

2. **Which values of items are to be included while calculating Private Final Consumption Expenditure**

A. Refer point 1. a only “it includes”

3. **Which values of items are to be excluded while calculating Private Final Consumption Expenditure?**

A. Refer point 1. a only “it excludes”

4. Which values of items are to be included and excluded while calculating Government Final Consumption Expenditure?

A. Refer point 1.b

5. Which values of items are to be included while calculating Gross Domestic Capital formation?

A. Refer point 2

Q.No.13. Explain the usefulness and significance of national income estimates. (A) (SM)

<u>**Usefulness and significance of National Income estimates:**</u> National income accounts are fundamental aggregate statistics in macro-economic analysis and are extremely useful, especially for the emerging and transition economies.

1. NI accounts are used for analyzing and evaluating the <u>short-run performance</u> of an economy.
2. The level of NI indicates the level of <u>economic activity</u> and <u>economic development</u> as well as <u>aggregate demand</u> for goods and services of a country.
3. The distribution pattern of NI determines the pattern of demand for goods and services and enables businesses to <u>forecast the future demand</u> for their products.
4. With the help of NI estimates the governments can fix various sector-specific development <u>targets</u> for different sectors of the economy and formulate suitable development <u>plans and policies</u> to increase growth rates.
5. NI statistics often influence popular and political <u>judgments</u> about the relative <u>success of economic programs.</u>
6. NI data along with financial and monetary data provide a guide to make <u>policies</u> for <u>growth and inflation</u>.
7. NI estimates are considered in <u>economic forecasting</u> and to make projections about the <u>future development</u> trends of the economy.
8. *The magnitude and distribution of NI, size of per capita income and the growth of these overtime decides <u>economic welfare</u>.*
9. *NI estimates throw light on income distribution and the possible inequality in the distribution among different categories of income earners.*
10. *NI estimates are used in comparison of structural statistics, such as ratios of investment, taxes, or government expenditures to GDP.*
11. *The NI data are also useful to determine the share of nation’s <u>contributions</u> to various <u>international bodies</u>.*

The estimates of national income show the composition and structure of national income in terms of different sectors of the economy, the periodical variations in them and the broad sectorial shifts in economy overtime. It is also possible to make temporal and spatial comparisons of the trend and speed of economic progress and development.

<u>**SIMILAR QUESTIONS:**</u>

1. Explain the need for National Income Estimates

A. Refer above answer

2. Explain the importance of National Income Estimates

A. Refer above answer

Q.No.14. What are the limitations of national income computation in India? (B) (SM)

There are innumerable limitations and challenges in the computation of national income. The task is more complex in underdeveloped and developing countries. Following are the general dilemmas in measurement of national income.

GDP measures ignore the following:

a) AS GDP per capita is a completely inadequate measure of welfare, the countries may have significantly different income distributions and, consequently, different levels of overall well-being for the same level of per capita income.

b) Quality improvements in systems and processes due to technological as well as managerial innovations which reflect true growth in output from year to year.

c) Productions hidden from government authorities, either because those engaged in it are evading taxes or because it is illegal (drugs, gambling etc.).

d) Non-market production (with a few exceptions) and Non-economic contributors to well-being (EX: health of a country's citizens, education levels, political participation, or other social and political factors) may significantly affect well-being levels.

e) The dis-utility of loss of leisure time. We know that, other things remaining the same, a country's GDP rises if the total hours of work increase.

f) Economic 'bads' for example: crime, pollution, traffic congestion etc. which make us worse off.

g) The volunteer work and services rendered without remuneration undertaken in the economy, even though such work can contribute to social well-being as much as paid work.

h) Many things that contribute to our economic welfare such as, leisure time, fairness, gender equality, security of community feeling etc.,

i) The distinction between production that makes us better off and production that only prevents us from becoming worse off.

E.g.1. Increased expenditure on police due to increase in crimes may increase GDP but these expenses only prevent us from becoming worse off. However, no reflection is made in national income of the negative impacts of higher crime rates.

E.g.2. Automobile accidents result in production of repairs, output of medical services, insurance, and legal services all of which are production included in GDP just as any other production.

Q.No.15. Mention the conceptual difficulties and challenges related to measurement of National Income which are difficult to resolve. (B) (SM)

1. **Conceptual difficulties related to measurement which are difficult to resolve:**
   - **a)** lack of an agreed definition of national income,
   - **b)** Accurate distinction between final goods and intermediate goods,
   - **c)** Issue of transfer payments,
   - **d)** Services of durable goods,
   - **e)** Difficulty of incorporating distribution of income
   - **f)** Valuation of a new good at constant prices, and
   - **g)** Valuation of government services
2. **Challenges in the computation of national income:**
   - **a)** Inadequacy of data and lack of reliability of available data,

b) Presence of non-monetised sector,

c) Production for self-consumption,

d) Absence of recording of incomes due to illiteracy and ignorance,

e) Lack of proper occupational classification, and

f) Accurate estimation of consumption of fixed capital.

g) Problem of duplication or double counting in computation of National Income.

SIMILAR QUESTION:

1. What are the challenges of National Income computation?

A. Refer 2nd Side heading

QUESTIONS FOR ACADEMIC INTEREST - FOR STUDENT SELF STUDY

Q.No.16. Define the term 'mixed income of self - employed' with respect to computation of National Income. (B) (SM)

Mixed income includes all those incomes which are difficult to separate labour income from capital income because people provide both labour and capital services.

a) Such is the case with self-employed people like lawyers, engineers, traders, proprietors etc.

b) In economies where subsistence production and small commodity production is dominant, most of the incomes of people would be of mixed type.

c) In sectors such as agriculture, trade, transport etc. in under developed countries (including India), it is difficult to differentiate between the labour element and the capital element of incomes of the people. In order to overcome this difficulty a new category of incomes, called 'mixed income' is introduced which includes all those incomes which are difficult to separate.

Q.No.17. Define the term 'private income' as used in India. (B) (SM)

"Private income is the total of factor incomes and transfer incomes received from all sources by private sector (private enterprise and households) within and outside the country". It also includes net factor income from abroad.

Private income = National income + Government transfer payments + Interest on national debt - Property income of government departments - Profits of government enterprises.

Q.No.18. What is intermediate consumption with respect to computation of National Income? (B) (SM)

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.

Q.No.19. Define the term 'Net exports'? (B) (SM)

Net exports are the difference between exports and imports of a country during the accounting year. It can be positive or negative.

Q.No.20. Define the term production boundary. (B) (SM)

1. All production activities recognized by SNA called the 'production boundary'.
2. The production boundary covers production of almost all goods and services classified in the National Industrial Classification (NIC).
3. Production of agriculture, forestry and fishing which are used for own consumption of producers is also included in the production boundary.

Q.No.21. Define the term 'Final goods' with respect to computation of National Income? (B) (SM)

The term "final goods" only includes new goods i.e. Manufactured goods as such, they are the opposite of raw materials, but include intermediate goods as well as final goods. Final goods can be classified into the following categories:

1. Durable goods 2. Non-durable goods 3. Services

Q.No.22. Define the term 'Economic bads' with respect to computation of National Income? Distinguish between production that makes us better off and production that only prevents us from becoming worse off with an example. (B) (SM)

GDP excludes transfer payments, financial transactions and non - reported output generated through illegal transactions such as narcotics and gambling. These are also known as 'bads' as opposed to goods which GDP accounts for.

Economic 'bads' for example: crime, pollution, traffic congestion etc. which make us worse off.

The distinction between production that makes us better off and production that only prevents us from becoming worse off.

E.g.1. Increased expenditure on police due to increase in crimes may increase GDP but these expenses only prevent us from becoming worse off. However, no reflection is made in national income of the negative impacts of higher crime rates.

E.g.2. Automobile accidents result in production of repairs, output of medical services, insurance, and legal services all of which are production included in GDP just as any other production.

DIFFERENCES - FOR STUDENT'S SELF STUDY

Q.No.23. Distinguish between 'Intermediate goods' and 'Final goods'. (B) (SM)

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.

Q.No.24. Distinguish between non-economic activities and economic activities. (B) (SM)

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 services, but they are not exchanged in a market transaction. So, they do not command any market value.

Q.No.25. What is the difference between 'national' and 'domestic'? (B) (SM)

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 (or)
National = Domestic + Net Factor Income from Abroad (or)
Domestic = National - Net Factor Income from Abroad

Q.No.26. What is the difference between the concepts 'market price' and 'factor cost' in national income accounting? (B) (SM)

The basis of distinction between market price and factor cost is net indirect taxes (i.e., Indirect taxes - Subsidies).

Market Price = Factor Cost + Net Indirect Taxes = Factor Cost + Indirect Taxes - Subsidies

Q.No.27. Differentiate between 'taxes on production' and 'product taxes'. (B) (SM)

Both Product taxes and taxes on production are Indirect taxes.

PRODUCT TAXES: Product taxes are related to the quantum of production and are levied by the government on goods and services like excise duties, customs, sales tax, service tax etc.

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

Q.No.28. How does Personal Income differ from Disposable Personal Income? (A) (SM, MTP M18, RTP N18, N18 - 3M)

Personal Income: It is a measure of actual current income receipts of persons from all sources which may or may not be earned from productive activities during a given period of time.

PI = NI + income received but not earned - Income earned but not received.

Disposable Personal Income (DPI): 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.

DPI = PI - Personal Income Taxes (or)
DPI = Consumption + Savings

TEST YOUR KNOWLEDGE

1. Which concept of national income is generally treated as national income?
2. Draw the basis of distinction between GDP current and constant prices
3. What is the difference between 'national' and 'domestic'?
4. What is the difference between Market price and Factor cost?
5. How does Personal Income differ from Disposable Personal Income?
6. Differentiate between 'taxes on production' and 'product taxes'
7. What is Value Added?
8. What is Gross Value Added?

9. What is Net Value Added?
10. If Net Factor Income from Abroad is negative then which concept will be greater? Either NDP or NNP.
11. Which term differentiates the terms ‘exports’ and ‘net exports’?
12. Distinguish between Intermediate goods and final goods.
13. Distinguish between non-economic activities and economic activities.
14. Do all the three methods of national income computation will arrive at the same figure in Indian economy?
15. In India by whom the state level estimates of national income are prepared?
16. Give some examples to ‘Supra-regional sectors’ of Indian economy.
17. Give some examples to transfer payments?
18. How does the estimates of supra regional activities are compiled to the nation?
19. How does the estimates of supra regional activities are allocated to the states?
20. Do land and residential buildings purchased or constructed by households forms a part of PFCE? If not under which topic it must be included?
21. In which concepts of national income includes transfer payments?
22. In which concepts of national income excludes transfer payments?
23. When it is difficult to separate labour income from capital income which term should be used to find the income? Will it be included in national income? If so under which method
24. In India by whom will be the National Accounts Statistics (NAS) are compiled?
25. Usually which periodical estimates are published by NAS?
26. As per the mandate of the FRBM Act 2003, the Ministry of Finance uses which concept of national income to determine the fiscal targets?
27. What is the present revised base year according to MoPSI?
28. By January 2015, instead of at factor cost sector-wise estimates of Gross Value Added (GVA) will now be given at which concept?
29. In which method national income calculation both the raw materials and intermediary goods are included?
30. Give some examples of income received but not earned in terms of personal income.
31. Give some examples of income earned but not received in terms of personal income.
32. How are the following transactions treated in national income calculation? What is the rationale in each case? ***(MTP M18)***
    i) Electricity sold to a steel plant.
    ii) Electric power sold to a consumer household.
    iii) A set of four tyres produced by MRF in 2017 and sold to Suzuki to be put on a 2017 car.

LIST OF FORMULAE

1. Gross - Net = Depreciation
2. Domestic + NFIA = National
3. Net Indirect Taxes = Indirect taxes - Subsidies
4. Market Price = Factor Cost + Net Indirect Taxes
5. Factor Cost = Market Price - Net Indirect Taxes
6. Real + Inflation = Nominal

7. Real - Deflation = Nominal

8. GDP_{MP} = Value of Output in the Domestic Territory - Value of Intermediate Consumption

$= \sum$ Value Added

9. Gross Domestic Product at Factor Cost (GDP_{FC}) = GDP_{MP} - Indirect Taxes + Subsidies

10. Gross Domestic Product at Factor Cost (GDP_{FC}) = Compensation of employees + Operating Surplus (rent + interest + profit) + Mixed Income of Self-employed + Depreciation

11. $GNP_{MP} = GDP_{MP}$ + Net Factor Income from Abroad

12. $GDP_{MP} = GNP_{MP}$ - Net Factor Income from Abroad

13. $NDP_{MP} = GDP_{MP}$ - Depreciation = NNP_{MP} - Net Factor Income from Abroad

14. $NDP_{FC} = NDP_{MP}$ - Net Indirect Taxes.

15. NDP_{FC} = Compensation of employees + Operating Surplus (rent + interest + profit) + Mixed Income of Self-employed

16. $NNP_{MP} = GNP_{MP}$ - Depreciation = NDP_{MP} + Net Factor Income from Abroad

17. $NNP_{MP} = GDP_{MP}$ + Net Factor Income from Abroad - Depreciation

18. NNP_{FC} = National Income = FID (Factor income earned in domestic territory) + NFIA.

19. PI = NI + income received but not earned - income earned but not received.

20. DI = PI - Personal Income Taxes = Consumption + Savings

21. Per capita Income $= \dfrac{\text{National Income}}{\text{Total Population}}$

CALCULATION OF NATIONAL INCOME UNDER PRODUCT METHOD:

22. Gross value added (GVA_{MP}) = Value of output - Intermediate consumption

= (Sales + change in stock) - Intermediate consumption

Net value added (NVA_{MP}) = $\sum$ (GVA_{MP}) - Depreciation

Net Domestic Product (NVA_{FC}) = Net value added (NVA_{MP}) - Net Indirect taxes

National Income (NNP_{FC}) = Net Domestic Product (NVA_{FC}) + (NFIA)

CALCULATION OF NATIONAL INCOME UNDER INCOME METHOD:

23. NNP_{FC} or National Income = Compensation of employees
+ Operating Surplus (rent + interest + profit)
+ Mixed Income of Self-employed
+ Net Factor Income from Abroad

CALCULATION OF NATIONAL INCOME UNDER EXPENDITURE METHOD:

24. GDP_{MP} = Final consumption expenditure + Gross domestic capital formation + Net exports.

$GNP_{MP} = GDP_{MP}$ + NFIA

$GNP_{FC} = GNP_{MP}$ - Net indirect taxes

National income or $NNP_{FC} = GNP_{FC}$ - Depreciation

25. Gross National Disposable Income = GNP_{MP} + Net current transfer received from rest of the world.

GNDI = (National Consumption Expenditure) + (Gross National Saving)

= (Government final consumption expenditure+ Private final consumption expenditure) + (Gross National Saving.)

26. **Private Income** = Income from domestic product accruing to private sector + NFIA + Transfer Incomes

= National Income - Income from Domestic product accruing to government sector + Transfer payments

= Personal Income + Corporate tax + Undistributed Profits

Note: Some new examples of Transfer payments are:

a) Interest on National Debt

b) Current transfers from Government

c) Net current transfers from Rest of the world

PROBLEMS FOR CLASSROOM DISCUSSION

1. Compute National income.

Consumption	750
Investment	250
Government Purchases	100
Exports	100
Imports	200

(SM) (ANS.: Y = RS. 1,000)

2. Calculate Gross Domestic Product at market Prices (GDP_{MP}) and derive national income from the following data **(in Crores of Rupees).**

Inventory Investment	100
Exports	200
Indirect taxes	100
Net factor income from abroad	(50)
Personal consumption expenditure	3,500
Gross residential construction investment	300
Depreciation	50
Imports	100
Government purchases of goods and services	1,000
Gross public investment	200
Gross business fixed investment	300

(SM) (ANS.: GDP_{MP} = RS. 5,500 CRORES; NNP_{FC} = RS. 5,300 CRORES)

3. You are given the following data on an economy **(In millions)**

Consumer Expenditure (inclusive of indirect taxes)	110
Investment	20
Government Expenditure (inclusive of transfer payments)	70
Exports	20
Imports	50
Net Property Income from abroad	10
Transfer payments	20
Indirect taxes	30
Population	0.5

i) Calculate the Gross Domestic Product at market prices.

ii) Calculate the Gross National Income at market prices.

iii) Calculate the Gross Domestic Product at factor cost.

iv) Calculate the per capita Gross National Income at factor cost.

(RTP M18) (ANS.: i) 150 MILLION; ii) 160 MILLION; iii) 120 MILLION; iv) 260)

4. Calculate Gross National product at Market Price by the production method and Income method:

Items	(Rs. in Crores)
i) Value of output of the primary sector	1,000
ii) Indirect taxes	200
iii) Compensation of employee	780
iv) Net factor income from abroad.	(100)
v) Intermediate purchase by all the sector	2,900
vi) Rent	300
vii) Value of output by secondary sector	2,000
viii) Subsidies	50
ix) Interest	600
x) Consumption of fixed capital.	120
xi) Value of output of the tertiary sector	3,000
xii) Profit	320
xiii) Mixed income of self employed	830

(ANS.: 3,000 CRORES) (SOLVE PROBLEM NO. 2 OF ASSIGNMENT PROBLEMS AS REWORK)

5. Find GDP_{MP} and GNP_{MP} from the following data (in Crores of Rs.) using income method. Show that it is the same as that obtained by expenditure method.

Personal Consumption	7,314
Depreciation	800
Wages	6,508
Indirect Business Taxes	1,000
Interest	1,060
Domestic Investment	1,482
Government Expenditures	2,156
Rental Income	34
Corporate Profits	682
Exports	1,346
Net Factor Income from Abroad	40
Mixed Income	806
Imports	1,408

(SM, MTP M18) (ANS.: GDP_{MP} = RS. 10,890; GNP_{MP} = RS. 10,930)

6. From, the following data, calculate the Gross National Product at Market Price using Value Added method.

Items	(Rs.in Crores)
Value of output in primary sector	500
Net factor income from abroad	20
Value of output in tertiary sector	700
Value of output in secondary sector	900
Government Transfer Payments	600
Intermediate consumption in tertiary sector	300
Intermediate consumption in primary sector	250
Intermediate consumption in secondary sector	300

(SM) (ANS.: GDP_{MP} = RS. 1,250 CRORES; GNP_{MP} = RS. 1,270 CRORES)
(SOLVE PROBLEM NO. 3 OF ASSIGNMENT PROBLEMS AS REWORK)

7. Calculate Net value added at market price of a firm:

Items	(Rs. in lakhs)
i) Sale in domestic market.	250
ii) Opening stock.	20
iii) Closing in stock	50

iv) Depreciation	15
v) Net in direct taxes	25
vi) Intermediate cost	105
vii) Export	10

(ANS.: RS. 160 LAKHS) (SOLVE PROBLEM NO. 4, 5 OF ASSIGNMENT PROBLEMS AS REWORK)

8. Calculate Personal Disposable Income from the given data:

Items	**(Rs. in Crores)**
i) Net current transferred from rest of the world.	3
ii) Private Income	200
iii) Personal taxes	30
iv) National debt interest	5
v) Corporate profit tax	20
vi) Undistributed profit of corporation	10

(ANS.: PDI: RS. 140 CRORES) (SOLVE PROBLEM NO. 10 OF ASSIGNMENT PROBLEMS AS REWORK)

9. Calculate Gross National Disposable income and Personal income:

Items	**(Rs. in Crores)**
i) Net factor income from abroad.	(50)
ii) Net indirect taxes	110
iii) Current Transferred by the government	40
iv) Corporate taxes	60
v) Net domestic product at market price	800
vi) National debt interest	80
vii) NCT from abroad.	100
viii) Consumption of fixed capital	50
ix) Domestic product accruing to govt.	70
x) Retain earning of Private Corporation.	10

(ANS.: GNDI RS. 900 CRORES; PI = 720 RS.) (SOLVE PROBLEM NO. 6, 7, 8, 9 OF ASSIGNMENT PROBLEMS AS REWORK)

10. Calculate from the following data

a) Private income

b) Personal income

c) Personal disposable income.

S.No.	**Particulars**	**Rs. in Crores**
1.	Factor income from NDP accruing to private sector	300
2.	Income from entrepreneurship and property accruing to govt. administrative departmental enterprises	70
3.	Savings of non-departmental enterprises	60
4.	Factor income from abroad	20
5.	Consumption of fixed capital	35
6.	Current transfer from rest of the world	15
7.	Corporation taxes	25
8.	Factor income to abroad	30
9.	Current transfer from govt. governmental administrative department	40
10.	Direct taxes paid by house hold	20
11.	National debt interest	05
12.	Saving of private corporate sector	80

(ANS.: A. PRIVATE INCOME: RS. 350 CRORES; B. PERSONAL INCOME: RS. 245 CRORES; C. PDI: RS. 225 CRORES)

(SOLVE PROBLEM NO. 11, 12, 13 OF ASSIGNMENT PROBLEMS AS REWORK)

ASSIGNMENT PROBLEMS - FOR STUDENT'S SELF PRACTICE

1. Calculate Value Added at factor cost from the following.

	Items	Rs. in Crores
a)	Purchase of Raw Materials	30
b)	Depreciation	12
c)	Sales	200
d)	Excise Tax	20
e)	Opening Stock	15
f)	Intermediate Consumption	48
g)	Closing Stock	10

(ANS.: VALUE ADDED AT FACTOR COST: RS. 127 CRORES)

2. Calculate Gross Domestic Product at Market Price by

a) Production Method and

b) Income Method

	Items	Rs. (in crores)
a)	Intermediate consumption by	
	i) Primary sector	500
	ii) Secondary sector	400
	iii) Tertiary sector	400
b)	Value of output by	
	i) Primary sector	1,000
	ii) Secondary sector	900
	iii) Tertiary sector	700
c)	Rent	10
d)	Compensation of employees	400
e)	Mixed income	550
f)	Operating surplus	300
g)	Net factor income from abroad	(20)
h)	Interest	5
i)	Consumption of fixed capital	40
j)	Net indirect taxes	10

(ANS.: A) PRODUCTION METHOD: RS. 1,300 CRORES; B. INOME METHOD: RS. 1,300 CRORES)

3. From the following data, compute the Gross National Product at Market Price (GNP_{MP}) using value added method.

	(Rs. in Crores)
Value of output in secondary Sector	1,000
Intermediate consumption in primary sector	300
Value of output in Tertiary Sector	3,000
Intermediate consumption in secondary sector	400
Net factor income from abroad	(100)
Value of output in Primary Sector	800
Intermediate consumption in Tertiary sector	900

(M18 (N) - 3M) (ANS.: GNP_{MP} = 3,100 CRORES)

4. Calculate Net value added at market price of a firm

Items	(Rs. in thousand)
i) Sale	700
ii) Change in stock	40
iii) Depreciation	80
iv) Net Indirect Taxes	100

v)	Purchase of machinery	250
vi)	Purchase of intermediate product.	400

(ANS.: NVA: RS. 260 THOUSAND)

5. Calculate Net value added at market price of a firm:

	Items	(Rs. in lakhs)
i)	Value of output	400
ii)	Change in stock	50
iii)	Depreciation	20
iv)	Net Indirect Taxes	25
v)	Intermediate cost	200
vi)	Export	10

(ANS.: NVA: RS. 180 LAKHS.)

6. Calculate Gross National Disposable income from the following data (in Rs. Crores)

NDP at factor cost	6,000
Net factor income from abroad	(300)
Consumption of fixed capital	400
Current transfers from government	200
Net current transfers from rest of the world	500
Indirect taxes	700
Subsidies	600

(RTP N18) (ANS.: GROSS NATIONAL DISPOSABLE INCOME: 6,700 CRORES)

7. Calculate Gross National Disposable Income from the following.

	Items	Rs. in crores
a)	National Income	2,000
b)	Net current transfers from rest of the world	200
c)	Consumption of fixed capital	100
d)	Net factor income from abroad	(50)
e)	Net indirect taxes	250

(ANS.: GNDI: RS. 2,550 CRORES)

8. Calculate National Income and Gross National Disposable Income from the following data:

a)	Net indirect tax	05
b)	Net domestic fixed capital formation	100
c)	Net exports	(20)
d)	Govt. final consumption expenditure	200
e)	Net current transfer from abroad	15
f)	Private final consumption expenditure	600
g)	Change in stock	10
h)	Net factor from abroad	05
i)	Gross domestic fixed capital formation	125

(ANS.: NATIONAL INCOME: RS. 890 CRORES; GNDI: RS. 935 CRORES)

9. Calculate (a) Net National Product at MP, and (b) Gross National Disposable Income

	Items	Rs. crores
a)	Private final Consumption expenditure	200
b)	Net indirect taxes	20
c)	Change in stocks	(15)
d)	Net current transfers from abroad	(10)
e)	Govt. final consumption expenditure	50
f)	Consumption of fixed capital	15
g)	Net domestic capital formation	30

h)	Net factor income from abroad	5
i)	Net imports	10

(ANS.: NNP_{MP} = RS. 275 CRORES; GNDI: RS. 280 CRORES)

10. From the following data, Calculate:

a) National Income

b) Personal Disposable Income.

i)	Profit	500
ii)	Rent	200
iii)	Private income	2,000
iv)	Mixed income of self-employed	800
v)	Compensation of employers	1,000
vi)	Consumption of fixed capital	100
vii)	Net factor income from abroad	(50)
viii)	Net retained earnings of private employees'	150
ix)	Interest	250
x)	Net exports	200
xi)	Corporation Taxes	100
xii)	Net indirect tax	160
xiii)	Direct taxes paid by houses hold's	120
xiv)	Employers contribution to social security scheme	60

(ANS.: NNP_{FC}: RS. 2,700 CRORES; PDI: RS. 1,630 CRORES)

11. Calculate Net National Disposable Income and Personal Income from the following data

	Particulars	**Rs. In crores**
1.	Net indirect taxes	90
2.	Compensation of employers	400
3.	Personal taxes	100
4.	Operating surplus	200
5.	Corporation profit tax	80
6.	Mixed income of self-employed	500
7.	National debt interest	70
8.	Saving of non-departmental enterprises	40
9.	Current transfer from govt.	60
10.	Income from property and entrepreneurship to govt. administrative Department	30
11.	Net current transfer from Rest of the world	20
12.	Net factor income from abroad	(50)
13.	saving of private corporate sector	20

(ANS.: NNDI: RS. 1,160 CRORES; PI: RS. 1,030 CRORES)

12. Calculate Private Income:

1.	Income from domestic product accruing to private sector	250
2.	Net current transfer from Rest of the world	40
3.	Net current transfer from govt. administrative dept.	10
4.	National debt interest	20
5.	Net factor income from abroad	05

(ANS.: PRIVATE INCOME: RS. 325 CRORES)

13. Calculate Private Income and Personal Disposable Income

S.No.	**Particulars**	**Rs. in Crores**
1.	National Income	5,050
2.	Income from property and entrepreneurship to government administrative department	500
3.	Saving of non-department public enterprises	100

4.	Corporation tax	80
5.	Current transfer from government administrative department	200
6.	Net factor income from abroad	(50)
7.	Direct personal tax	150
8.	Indirect taxes	220
9.	Current transfer from Rest of the world	80
10.	Saving of private corporate sector	500

(ANS.: PRIVATE INCOME: RS. 4,730 CRORES; PDI: RS. 4,000 CRORES)

THE END