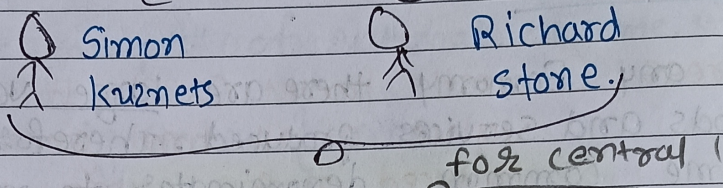
8-10 marks.

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Ch-6. Unit-1 National Income Accounting.



for central level.

The central statistical organization (CSO) in the ministry [ministry of statics + programme Implemation (MOSPI)] is Responsible for the compilation of National Accounts Statisticts. At the State level, State [Directorates of Economics & Statistics (DES)] have the resposibility of compling thair state Domestic Product and other aggregates.

for state level.

WHY?? USEFULNESS??

- helps business to forecast future demand of products.
- It shows composition (રચના) & structure of National Income.
- It helps to the government in making policies.
- International "comparision".

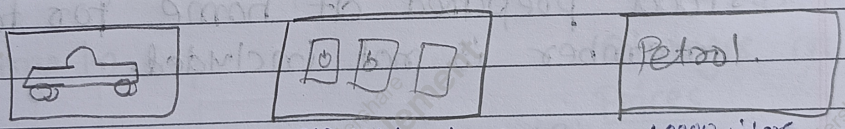
Gross Domestic Product.

Gross domestic Product (GDP) is a measure of the market value of all final economic goods & services, produced within the domestic territory of a country during a given time period ~~of time~~

It includes the value of goods produced, such as houses and mobiles, and the value of services, such as telecom, health, insurance.

The output of each of these is valued at its market price, and the values are added together to get GDP.

1. Market Value.



100 cars — 5 crores

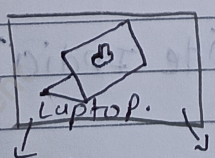
200 mobilephone — 20,00,000

10,000 liters. — 500,000

Market value

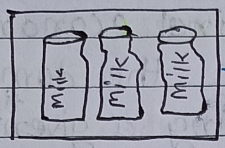
GDP = 5,25,00,000

2. Final goods & Services: Those goods which are either used for consumption or for investment.

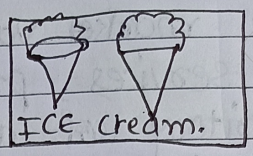


Consumption Investment.

→ Value of Intermidiate goods are not inclueded in final goods like.



Used in further period



3 litres of Milk
Market value ₹150
↓
Consumed by Household
This is final goods will be include in GDP.

market value ₹500.
↓
Already includes value of milk = ₹150
→ value of ~~fff~~ Milk will not be included in GDP

* Economic goods :- which are exchange ~~fff~~ in a market.
→ Food prepared at home for family member is not included.

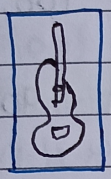
③ Domestic Territory :- Geography boundry of the country.

Hardik [Indian] - Services in India - ₹100
Rihana [non-Indian] - Concert in India - ₹10 cr.] will be included in GDP.

→ Hardik (Indian) - Services outside India] not include in GDP.

④ Given time period :- GDP is a flow variable, includes goods & services during the year.

Ex.



	Price		Qty	GDP	
2022	10,000	x	10	100,000	Nominal GDP ↓ GDP at current price
2023.	12,000	x	9	108,000	

Nominal GDP = Current year market price x Qty of goods & Services period during the year.

Nominal GDP changes bcz of 2 reason

- Change in Qty
- Changes in Prices

→ If our goal is to measure production & its changes over time, we need to eliminate the effect of change in prices on our measure of GDP

For this, we need to calculate Real GDP

GDP is calculated using the Price of Selected 'Base year'

* GDP at constant prices. (Real GDP)

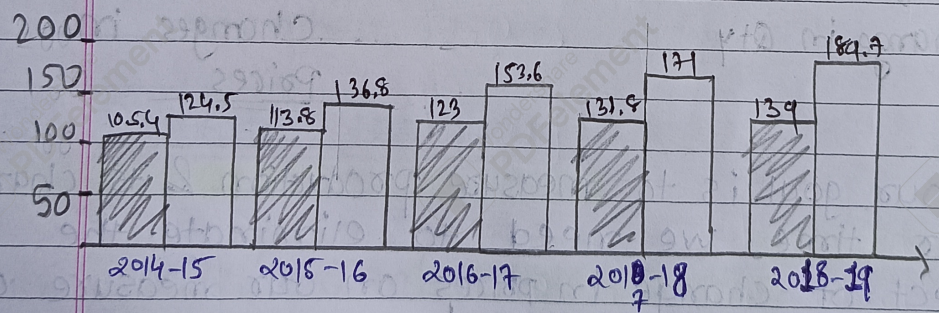
	Price	Qty	Nominal GDP	Real GDP
2022	10,000	× 10	100,000	100,000 ↓
2023	12000	× 9	108,000	90,000

- Real GDP is not affected by change in Prices.

⟹ GAPS BETWEEN THE NOMINAL AND REAL GDP

Real GDP (2011-12 prices) & Nominal GDP (at current prices) in Rs. Lakh Cr.
(2011-12 → Base Year)

Real ▭ Nominal



Ex

	Qty	Prices	Nominal	Real GDP.
2011-12	100	20	2000	2000
2022-23	15	50	7500	3000

Real GDP Growth % = $\frac{3000-2000}{2000} \times 100$

$= \frac{1000}{2000} \times 100$

$= \boxed{50.1\%}$

Q. Real GDP or Gross Domestic Product (GDP) at constant (2011-12) prices in Q1 2022-23 is estimated to attain a level of ₹36.85 lakh crore, as against ₹32.46 lakh crore in Q1 2021-22, showing a growth of 13.5 percent as ~~compared to 20.1 percent in Q1 2021-22~~.

(2011-12) → Base year

Real GDP - [22-23] - Q_2 = ₹36.85

Real GDP - [21-22] - Q_1 = ₹32.46.

$\Rightarrow \frac{36.85 - 32.46}{32.46} \times 100$

$= \frac{4.39}{32.46} \times 100$

$= 13.53\%$

$\boxed{\frac{CY - PY}{PY} \times 100.}$

Ex

	Price	Qty	Nominal GDP	Real GDP.
2011-12	150	50	7500	7500
2022-23	300	200	60,000	30,000
			↓	↓
			200×300	200×150

$\Rightarrow \frac{\text{Nominal GDP}}{\text{Real GDP}} = \frac{200 \times 300}{200 \times 150}$

$= \frac{300}{150} = 2$

↓

GDP Deflator.

GDP Defletor. = $\frac{\text{Nominal GDP}}{\text{Real GDP}} \times 100$.

$= \frac{60,000}{30,000} \times 100$

$= \boxed{200}$ ↳ Product की ₹100 का the in the base year [11-12] wo. CY. [22-23] me ₹200 ka ho gaya.

Ex Nominal GDP = 7500
GDP Defletor = 250
Calculate Real GDP

Real GDP = $\frac{\text{Nominal GDP}}{\text{GDP Defletor}} \times 100$.

$= \frac{7500}{250} \times 100$

$= \boxed{3000}$

GDP Defletor can be used to deflate (or also called) ↓ take inflation out of GDP.

Price Index
↳ $\frac{\text{Price of CY}}{\text{Price of Base Year}}$.

↳ Deflator measures the change in prices that has occurred between base year & current year

ex

	Nominal GDP	Real GDP
2011-12	2000	2000
2022-23	10,000	4000

1. GDP deflator of the base year
2. GDP deflator of 22.23

1. GDP deflator of 2011-12 = $\frac{2000}{2000} \times 100$

= 100

The deflator of the base year is always = 100

2. GDP defletor of 2022-23 = $\frac{10,000}{4000} \times 100$

= 250

ex Nominal GDP = 9000
Real GDP = 10,000

GDP defletor = $\frac{9000}{10,000} \times 100$

= 90

→ Illustration = 1

Years	Nominal GDP	Real GDP	GDP Deflator
2014	500	500	100
2015	800	650	123.08
2016	1150	800	143.75
2017	1300	950	136.84
2018	1550	1190	130.25
2019	1700	1240	137.10

GDP Deflator > 100, this indicates that price levels has increased as compared to the base year. and vice versa.

→ Illustration = 2

The nominal & real GDP respectively of a country in a particular year are ₹3000 cr. and ₹4700 crs. respectively. Calculate GDP deflator & comment of on the level of prices of the year in comparision with the base year.

$$\text{GDP deflator} = \frac{3000}{4700} \times 100$$

$$= \boxed{63.83}$$

~~This~~ The price level has fallen since GDP deflator is less than $\boxed{100}$

→ Illustration=3.

Find nominal GDP if real GDP = 450 and price Index = 120

$$\text{Nominal GDP} = \frac{450}{100} \times 120$$

$$= 540$$

$$\text{GDP deflator} = \frac{\text{Nominal}}{\text{Real}} \times 100$$

$$\frac{\text{GDP deflator} \times \text{Real GDP}}{100} = \text{Nominal GDP}$$

→ Illustration 8-4

Suppose nominal GDP of a country in 2010 is given at ₹600 cr. and price index is given as base year 2010 is 100. Now let the nominal GDP increases to ₹1200 cr. in 2018 and the price Index rises to 110, find out real GDP?

	Nominal GDP	Price Index-GDP def.
2010	600 cr.	100
2018	1200 cr.	110

(i) Real GDP of 2010 = 600 cr.

→ Real GDP of 2018 = $\frac{1200 \text{ cr.}}{110} \times 100$.

= ₹1090.91 cr.

→ We can calculate Inflation rate using GDP deflator.

Inflation rate in year 2 = ~~GDP deflator in year 2~~

$$\frac{\text{GDP deflator in year 2} \ (-) \ \text{GDP deflator in year 1}}{\text{GDP deflator in year 1}} \times 100$$

Years	GDP Deflator	Inflation Rate
2014	100	
2015	123.08	$\frac{123.08-100}{100} \times 100 = 23.08\%$
2016	143.75	$\frac{143.75-123.08}{123.08} \times 100 = 16.79\%$
2017	136.84	$\frac{136.84-143.75}{143.75} \times 100 = -4.81\%$
2018	130.25	$\frac{130.25-136.84}{136.84} \times 100 = -4.81\%$
2019	137.10	$\frac{137.10-130.25}{130.25} \times 100 = 5.26\%$

→ Factors of Production

	Land	Labour	Capital	Entrepreneur
Factor Cost / Factor Income,	Rent (20)	Wages (10)	Interest (10)	Profit (10)

Cost of Calculator = 40 + 10

Factor Cost = 50 → Amt Received by factor owners

Net indirect Taxes: (+) Indirect Taxes = 10; (-) Subsidy = (5)

Market price = 55 → Amt to be paid by buyer.

⇒ Factor cost + Net Indirect Taxes = Market prices

↓

Indirect Taxes - Subsidy.

1° (-) 5

Eg. GDPmp = ₹ 500

Indirect Taxes = ₹40

Subsidies = ₹10.

Calculate ~~GDP fc.~~ GDPfc.

$GDP_{FC} = GDP_{mp} - \text{Indirect Taxes} + \text{Subsidy}$.

= ₹ 500 - 40 + 10

= ₹ 470

Eg GDPFC = 850 ₹

Net Indirect Taxes = 80 ₹

Subsidies = 20 ₹

Indirect Tax - Subsidy.

यहाँ पे subsidy दो बार Add नहीं होगा क्योंकी already NIT में included है।

Calculate GDPmp?

GDPmp = GDPFC + Indirect Tax - Subsidy.

~~Net Indirect Tax.~~

= ₹850 + ₹80.

= ₹ 930.

DOMESTIC v/s NATIONAL

Domestic

Goods & services produced in India
↳ whether Resident or Non-Resident.

- Income earned by Residents within domestic territory.
  - ex: Tarqa clothing (A)
- Income earned by Non-Residents within Domestic territory.
  - Tylor swift Concert. (B)

National

Should be Produced by INDIAN Residents whether India or outside India.

- Income earned by Residents within Domestic Territory.
  - Tarqa clothing (A)
- Income earned by Residents outside the Domestic Territory.
  - Zakir Khan Concert in foreign (C)

⇒ Domestic = A + B.
Domestic (-) B = A

National = A + C
National (-) C = A

→ Domestic (-) B = National - C
Domestic (+) C (-) B = National.

- Factor Income From Abroad.
- Factor Income To Abroad.

Domestic (+) Factor Income From Abroad (-) Factor Income To Abrod. = National

Net Factor Income From Abroad (NFIA)

Ex GDPmp = 1200
Factor Income from Abroad. = 200
Factor Income To Abroad = 250
GNPmp = ?

GNPmp = GDPmp (+) Factor Income (-) Factor Income
From Abroad. To Abroad.
(NFIA)

= 1200 + 200 - 250
GNPmp. = 1150 ₹

	Domestic	National
① Income earned by Indian Co. in USA.	X	✓
② Income earned by American Co. in India.	✓	X
③ Income earned by Indian Resident in India.	✓	✓

GROSS v/s NET

Eg 2022-23
Machin produced = ₹10,000
Other Goods & Services produced = ₹40,000
GDPmp = ₹50,000.

↳ Useful life > 1 year
Net = Gross - Depriciation.
(also called) → Consumption of Fixed capital

Deps- Portion of fixed capital used up in the process of production.

Important formulas

1. $GNP_{FC} = GDP_{FC} + NFIA$
2. $GDP_{mp} = GDP_{FC} + \text{Indirect Taxes} - \text{Subsidies}$
   or Net Indirect Taxes.
3. $GNP_{FC} = GDP_{mp} + NFIA - \underbrace{\text{Indirect Taxes} - \text{Subsidies}}_{NIT}$
4. $NNP_{FC} = GDP_{mp} - Dep^{n} + NFIA - \underbrace{\text{Ind. Tax} + \text{Subsidies}}_{NIT}$
5. $GNP_{mp} = NDP_{FC} + Dep + NFIA + \underbrace{\text{Ind. Tax} - \text{Subsidies}}_{NIT}$

GDP में क्या add नहीं होता → **Exclusions from GDP.**

1. Transfer Payment Income :-
   ↙ Non-Factor Income.
   This Payment do not result in the production of goods or Services. (ex) Social Security benifits, Donation, Gifts etc.

2. Financial transactions :-
   Stocks/Shares which are exchanged in the market are not included.
   However, value of services that accompany Sale & purchase are included.
   ↳ brokerage by Zerodha.

3. Sale of Second hand Goods

4. Unreported Output: Illegal transactions (Ex. Gambling.)

Taxes & Subsidy

Production Tax & Subsidy
→ Independent of Volume of Actual production.
ex = Factory licence, pollution tax, Registration fees, etc.

Subsidy - Ex. Subsidies to small industries in Villages.

Product Tax & Subsidy.
→ on the Basis of unit of production.
Ex = GST, Import Export duty, etc.

Ex = Subsidies on LPG, fertilizers, etc.

NSI = FC = Indirect Tax − Subsidy (Eq. 03, Eq. 04)

⇒ Basic Price = Factor Cost (+) Production Tax (−) Production Subsidy.

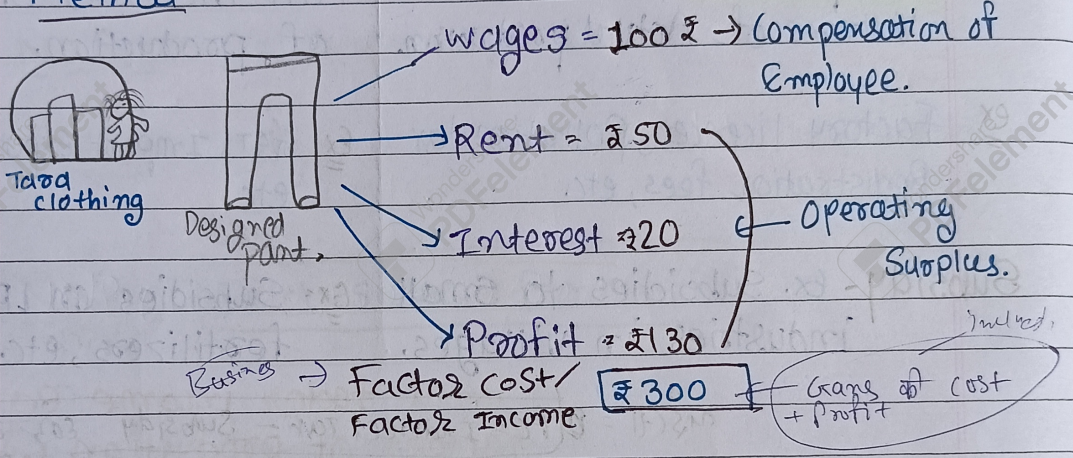
Market price = Basic Price (+) Product Tax (−) Product Subsidy.

Market price = Factor Cost
(+) Production Tax
(−) Production Subsidy
(+) Product Tax
(−) Product Subsidy.

(+) Indirect Tax (-) Subsidy.

Factor cost + Production Tax (-) Subsidy → Basic Price. + Product Tax - Subsidiy → Market Price.

* Calculation of National Income using Income method.



→ whather is produced by a producing unit is distributed among factors of production.

→ Operating Surplus = Rent + Interest + Profit.

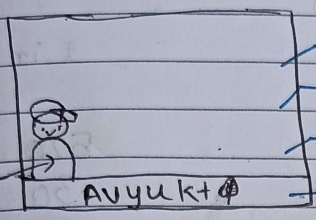
Income from property

Income from entrepreneurship.

Represents the Income earned by business & entreprenuers from their productive activities

OP. Surplus :- Income from (+) Income from Entrepreneurship
property

→ Mixed Income of Self Employed.



CA Harshit Pachhanda.

→ Uses own Labour
Own Capital
Own property
Entrepreneour.

Cannot differentiate between Wage, Int. or profit.

Enterprises which are not incorporated, uses their own Land.

Labour, Capital & Entrepreneurship
→ Remuneration earned by Self employed is known as Mixed Income.

Domestic Income :- Total factor income earned by factors of production within domestic territory.

NDP_{FC} → Wages — Compensation of employees.
Rent
Interest
Profit
mixed Income of self employed.
= FC

Operating profit

Net Domestic Product.

Factor cost

Income from Property & Entrepreneurship.

National Income = Domestic Income + NFIA
= NDP + NFIA
= NNP_{FC}

Convert.

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Ques Calculate National income from the following
NNP_{FC}.

₹ in crores.

Compensation of employees	520 ✓
Factor income to abroad.	30
Net factor income from Abroad	70 ✓
Net indirect Taxes	40
Income from property	310 ✓ + Rent, Int.
Rent	60
Mixed Income of self employed	605 ✓
Profits.	420 ✓

NNP_{FC} = 520 + 70 + ~~50~~ 310 + 605 + 420

= ₹ 1925 Cr.

$NNP_{FC} = NDP_{FC} + NFIA$

Income earned by Resident from Abroad [FIFA] Zakir Hussain.

Income earned by Non-Resident from India [FITA]

Compensasation from employees (-) Compensation from employs.

1. Net Compensation from employees.
+ Net income from property.
+ Net income from entrepreneurship
+ Net Retained earning.
(उपार्जन कमाया पर distribute नहीं किया।)

NFIA = Net compensation from employees.
+ Net Income from property & entrepreneurship
+ Net retained earnings.
+ Net Income from entrepreneurship.

NFIA

NFIA = Net Compensation from employees.
+ Net Income from property & Entrepreneurship. (OS)
+ Net retained earnings

$GDP_{FC} = NDP_{FC}$ + Depriciation

= Compensation of employer.
+ operating Surplus. [Rent + Int + Profit] (OS)
+ mixed income of self employe
+ Depriciation.

(दोनों same है।)

- Per capita Income | Per capita GDP

Country's GDP adj. by - Real
Total population Inflation GDP.

→ measure of country's economic output per person.

→ It Serves as indicator of the standard of living of a country.

Q. The GDP Per capita is.

(A) a measure of a country's economic output per ~~pes~~ person. ✓

(B) Actual current receipts of persons. ✗

(C) national income divided by population. ✓

(D) (a) & (c) above.

NATIONAL INCOME V/s. PERSONAL INCOME

Includes factor incomes earned irrespective of whether received or not.

→ Measure of Factor Income Earned.

→ Transfer Income are not be included.

Includes income Received by household Sector including NPISH.

Factor income as well as Transfer income are included.

→ measure of Actual Income Received from all Sources.

NPISH = Non Profit institution Serving Households
- They receive Voluntary Contribution, donations, grants.

ex: Charitable organisation educational Organisations. etc.

EPF = Employe Provident fund.

	Factor Income (earned Income)		Transfer Income (Not earned)	
	Recived	Not Received	Recived	Not Received.
National Income	✓	✓	×	×
Personal Income.	✓	×	✓	×

Personal Income = National Income
(-) Income earned but not received
(+) Income Received but not earned

Importants Points:-

1. Individuals also contribute income which they do not receive:-
   - Undistributed Corporate Profits
   - Contribution of employer's to social Security. EPF

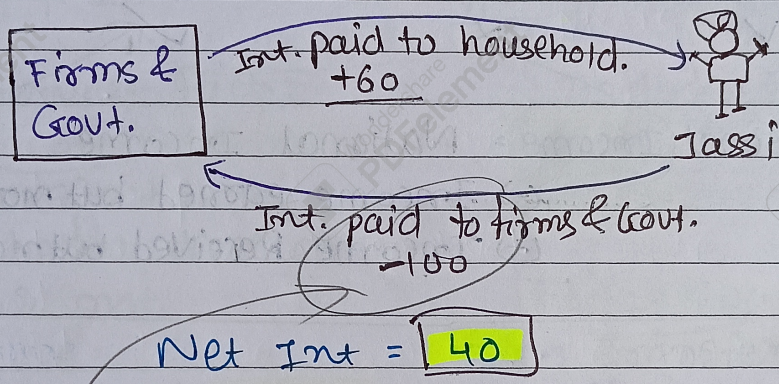
Ex. Corporate profit ₹100 (already counted in National Income.)
- Tax ₹25 — Income earned but not received.
- Dividend ₹15 — only this is included in Personal Income.
- Retained earnings ₹60 (Undistributed Profit)

PI में नहीं आने वाली चीजें।

(2) Personal Income Excludes :-

- (a) Retained earnings
- (b) Indirect business tax
- (c) Corporate income tax
- (d) Contribution towards Social Security.

(3)



- Net Interest paid by household to firms & Govt. is also deducted from National Income.

Net Int payment = Int paid (−) Int Recived.

Personal Income = National Income
Income earned but not Received. → (−) Undistributed profits
(−) Corporate Tax
(+) Transfer payments to the household
(−) Net Int paid by households.

④ National Income is not the sum of personal Income.

⇒ Disposable Personal Income.

↓

Personal Income
(−) Personal Income Tax
(−) Non Tax payment (ie) fees, challan.

* money in the hands of households, available for consumption, savings.

Q. Find Personal Income.

	₹ in crores.	National Income
NDP_{FC}	8000	↓ NNP_{FC}
NFIA	200 (+)	
Undistributed profits	1000 (−)	
Corporate Tax.	500 (−)	
	1500	
Int rec. by households	~~1200~~ (+)	
	1200	
Int paid by households	~~300~~ (−)	
Transfer Income	300 (+)	
personal Tax.	500	

NNP_{FC} = NDP_{FC} + NFIA.
= 8000 + 200

Net Int. Paid
↳ 1200 − 1500 = (300)

PI = NNP_{FC} − 1000 − 500 ~~+~~ 300 + 300.
= 7300 ₹

Personal Income = 8000 + 200 − 1000 − 500
+ 1500 − 1200 + 300
= ₹7300

Note:- अगर मुझे PI निकालनी है तो उसमे P.T Minus नहीं होगा Personal Di. मे होगा।.

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Personal Tax

Disposable Personal Income = 7300 - 500
= 6800 ₹

* **Illustration = 5**

From the following data calculate NNPFC, NNPmp, GNPmp and GDPmp.

NNPFC =

items. ₹ in crores

operating Surplus ← Rent, Int., Profit.	2000
Mixed income of self-employed.	1100
Rent	550
Profit	800
Net Indirect Tax	450
Consumption of fixed capital - Dep.	400
Net factor income from Abroad.	-50
Compensation of employes.	1000

NDPFC + (-50) ∴ NDPFC = OS.
= come. empl.
= Mixed Inc.

NNP_{FC} = 2000 + 1100 - 50 + 1000
= 4050.

FC formula
NIT

NNP_{mp} = NNP_{FC} + Indirect Tax - Subsidy.
= 4050 + 450 (NIT)
= 4500

GNPmp = NNPmp + Dep
= 4500 + 400
= 4900

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

$= 4900 - (-50)$

$= 4900 + 50$

$= \boxed{4950}$

$GDP_{MP} = NNP_{MP} + Dep - NFIA$

$= 4500 + 450 - (-50)$

$= 4950.$

* **Illustration :- 7.**

Calculate the aggregate value of depriciation when the GDP at market price (GDP_{MP}) of a country in a particular year was ₹1100 crores. Net Factor Income from Abroad. (NFIA) was ₹100 crores. The value of Indirect Tax - subsidies (NIT) was ₹150 Crores and National Income was ₹850 crores.

$GDP_{MP} = 1100$, $NFIA = 100$, $NIT = 150$

$NNP_{FC} = 850$

$GDP_{MP} = NNP_{FC} + Dep^{n} - NFIA + NIT$

$1100 = 850 + Dep^{n} - 100 + 150.$

$Dep^{n} = ₹200$ crores.

(OR).

$NNP_{FC} = GDP_{MP} - Dep^{n} + NFIA - NIT.$

$850 = 1100 - Dep^{n} + 100 - 150$

$\boxed{Dep^{n} = ₹200 \text{ crores}}$

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Domestic Income [NDP$_{FC}$]

Income from Domestic Product accruing to PRIVATE SECTOR.

- Household
- Business.

Income from Domestic Product accruing to Public / Govt sector

→ Income from Property & Entrepreneurship accruing to Govt. administrative Department

→ Savings of non-departmental enterprises
- LIC

NDP$_{FC}$ = Income from Domestic Product accruing to private sector
(+)
Income from Domestic Product accruing to Govt. sector.

Factor Income.

Income from Domestic Product accruing Private Sector
↓
Pvt sector at FI & Domestically earn

= (-) Income from Domestic Product accruing to Govt. Securities.

earned. Household Business.

Private Income = Income which accrues to the Private Sector from all sources within & outside the country

NFIA — Factor Income; Transfer Income

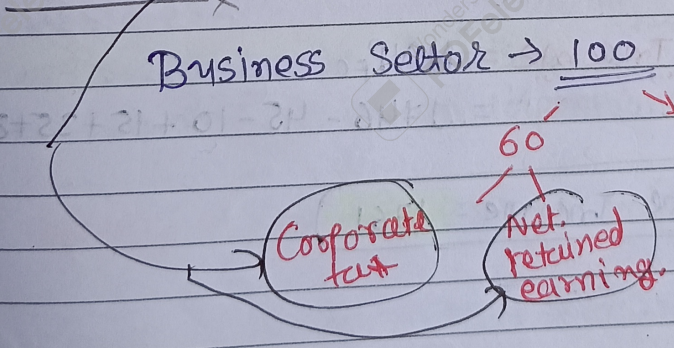
> **Private Income :-** Income from Domestic Product accruing to Private sector.
> (+) NFIA
> (+) Transfer Income.

→ Transfer Income = 1. Int. on National Debt
↳ Loan taken by Govt. for ~~consumption~~ Consumption

2. Transfer Inc. from Govt. Department
3. Transfer Inc. from Rest of the world.

* Personal Income v/s Private Income.

→ Private Income = Personal Income
+ Corporate Tax on Profits
+ Undistributed Profits



→ जब हमें National Income दिया है और Personal Income निकालना है तो Household sector की Income को minus करेंगे और Transfer Inc. को Add करेंगे।

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* ILLUSTRATION = 6.

From the following data, estimate National Income and Personal Income. $NNP_{FC} = MP - NIT$

items. ₹ in crores.

→ Net national Product at Market price 1891
→ Income from Property & entrepreneurship Accruing to Government administrative departments. (45)
→ Indirect Taxes - Ignore. 175
→ Subsidies - Ignore. 30
→ Saving of non-departmental enterprises (10)
→ Interest on National debt. Transfer Income. +15
→ Current transfers from Government. Transfer Income +35
→ Current transfers from rest of the World. +20
Part of Profit → Saving of private Corporate Sector. - Retained earning (Ignore) 25
Part of Profit → Corporate Profit Tax. 25

$NNP_{FC} = NNP_{MP} - Indirect\ Tax + Subsidy.$
$[NNP_{FC}] = 1891 - 175 + 30$
$= 1746.$

$Private\ Income = NNP_{FC}$
$= 1746 - 45 - 10 + 15 + 35 + 20.$

Private Income = 1761

→ Personal Inc.= Household sector की Income जो उसको received hui है from all the resources

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Business - Profit 100 National Income.
Private Sector Income.

Dividend 40 | Retained 20 | Tax. 40

Personal Income = 1746 - 45 - 10 + 15 + 35 + 20 - 25 - 25

=

Household = ₹1711

* ILLUSTRATION = 8.

On basis of following information, calculate NNP at market price and Disposable Personal Income.

NNPmp

Items	₹ in crores
NDP at factor cost NDPFC.	+ (14900 + 80) NNPFC
Income from domestic Product accruing to Govt.	(150)
Interest on National debt Transfer ~~Govt.~~ Income.	+ 170
Transfer Payment by government	+ 60
Net private donation from abroad.	+ 30
Net factor Income from abroad.	+ 80
Indirect taxes	335
Direct taxes ← Personal Income tax..	100
Subsidies.	262
Taxes on corporate profits (These two are Business sector Income.)	(222)
Undistributed profits on corporations.	(105)

$NNP_{MP} = NDP_{FC} + NFIA + \text{Indirect Tax} - \text{Subsidies}$ (NIT)

= ~~15080~~ 14900 + 80 + 335 - 262

NNPmp = 15053

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Personal Income = NI + Income received but not earned - Income earned but not received.

$= 14900 - 150 + 170 + 60 + 30 + 80 - 222 - 105$

PI = 14763

Personal Disposable Income = PI - Personal Income Tax.

$= 14763 (-) 100$

P. Disposable Income = 14663

1.10 Calculate (i) Private Income (ii) Personal Income & (iii) Personal Disposable Income.

National Income NNP$_{FC}$	3000
Savings of Private Corporate Sector	30
Corporate Tax	80
Current transfers from Govt.	+ 60
Income from property & entrepreneurship to Govt.	(150)
Current transfers from rest of the world.	+ 50
Savings of non-departmental govt. Sector	(40)
Net Indirect Taxes	250
Direct taxes paid by household.	100
Net factor income from abroad.	(10

NNP$_{FC}$

1] Private Income = $3000 + 60 - 150 + 50 - 40$.

= ₹ 2920

2] Personal Income = Private Inc. - ~~household~~ Business Sector Inc.

$= 2920 - 30 - 80$.

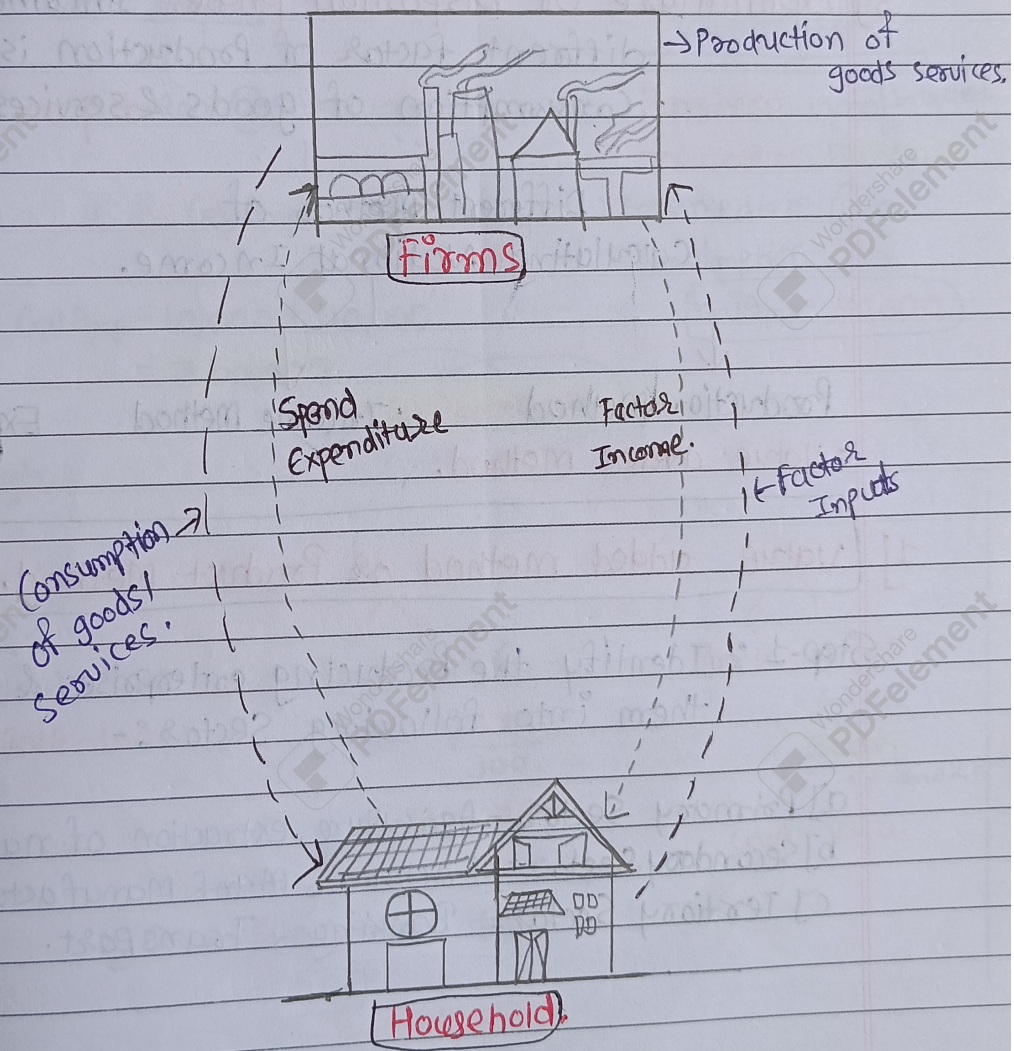
= 2810

3) Personal Disposable Income. = Personal Income (-) Personal Income Tax. (Direct Tax Paid by household).

= 2810 - 100

= 2710

Circular flow of Income.



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Three different interlinked phases:-

1) Production of Goods & Services :- firm produce goods & Services with the help of factors/Inputs.

2] Income or Distribution phases:- Firm of factor incomes in the form of Rent, wages, Int & Profit.

3] Expenditure or Dispostion phase:- Income received by different factor of production is spent on Consumption of goods & services.

Different Methods of Calculating National Income.

- Production Method - Value added Method.
- Income Method
- Expenditure Method.

1] Value added method or Product Method.

Step-1 :- Identify the Producing enterprises & classify them into following Sector:-

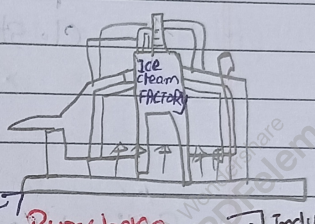
a] Primary Sector - Agriculture, extraction of natural resources
b] Secondary Sector - Factory, ~~Manf~~ Manufacturing.
c] Tertiary Sector = Banking, Transport.

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Step 8-2 Estimate the Gross Value added (GVAmp) by each producing enterprise.

GVAmp = Value of output - Intermediate Consumption.

Amul
The taste of India.



Total output = 200L @ 50 = ₹10,000

Purchase - 10,000 Included.

Ice cream 50,000

(-) Intermediate (10,000) Consumption

GVAmp = 40,000

GVAmp = ₹19000

Σ GVAmp = 10,000 + 40,000
= ₹ 50,000

Σ GVAmp = GDPmp.

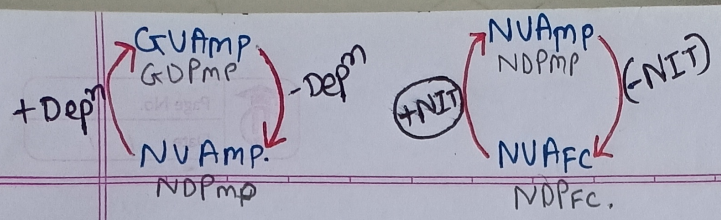
Rough.

Wood - ₹100
GVA - 100.

Purchase = 100
+ 200
300.
GVA = 200

Purchase = 300
+ 200
500
consume 2P.
GVA = 200.

Σ GVAmp = 100 + 200 + 200
= 500
Σ GDPmp



→ Value of output. = Sale + change in stock.
↓
Cl. stock - Op. Stock.

Eg:-

Total Sales = ₹100,000
Op. Stock. = ₹10,000
Cl. stock = ₹15,000

Value of output = Sales + (Cl. Stock - Op. Stock.)
CIS.

= 100000 + 15000 - 10,000
= 105000

Step = 3. Estimation of National Income.

NNP_{FC} = GVAmp.

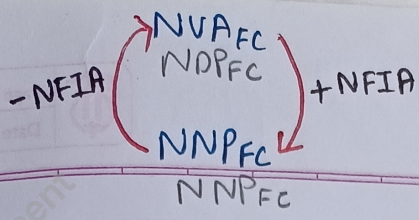
NNP_{FC} = GDP_{mp} - Dep + NFIA - Net indirect Taxes.

NNP NVAmp.

ILLUSTRATION = 9.

Calculate National Income by value added. Method with the help of data

Particulars.	₹ (in crores).
Sales	700
opening stock.	500
Intermidiate Consumption	350
Closing stock.	400
Net factor Income from Abroad.	30
Depriciation	150
Excise Tax ← also Indirect Tax.	110
Subsidies.	50



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GVAmp = Value of output - Intermidiate consumption.
(GDPmp) Sales ± (Cl. stock - op. stock)
(CIS).

= [700 - 500 + 400] - 350.

GVAmp = 250
GDPmp.

NNP FC = GDPmp - Dep + NFIA - Indirect Tax - Subsidy.
= 250 - 150 + 30 - 110 - 50
60
= ₹70 Crores

Illustration = 11 Q:- Calculate the National Income by value added method.

Particulars	(₹ in crores)
→ Value of Output in Primary Sector.	2000
→ Intermedeate consumption of primary sector.	200
→ Value of output of secondary sector.	2800
→ Intermediate consumption of secondary sector.	800
→ Value of output tertiary sector.	1600
→ Intermidiate Consumption of tertiary sector.	600
→ Net Factor Income from ~~Abroad.~~ Abroad.	-30
→ Net Indirect Taxes.	300
→ Depriciation.	470.

{VO1 - IC} {VO2 - IC} {VO3 - IC}
GDPmp = (2000 - 200) + (2800 - 800) + (1600 - 600)
= 4800 (GVAmp - Primary)

NNP FC = GDPmp - Depn + NFIA - NIT.
= 4800 - 470 + (-30) - 300.
= ₹4000

ILLUSTRAION=12. - NVAFC.
NDPFC

Calculate Net value Added by Factor Cost from the following data.

items.	₹ in crores.
Purchase of materials	85
Sales	450
Depriciation	30
opening stock.	40
closing stock.	30
Exise tax	45
Intermediate Consumption	200
Subsidies.	15.

Intermediate Consumption already includes Purchase of material

GVAmp. = Value of output. - Intermidiate Consumption.
= Sales + [C.Stock - Op.Stock.] - IC.

= 450 + [30 - 40] - 200

GVAmp. = ₹240

NVAFC. = GVAmp. - Depn - [Indirect Tax + Subsidy.]
(NIT.)

= 240 - 30 - 45 + 15

= ₹180 Crores.

Illustration :- 10.

Calculate the operating surplus (→ Rent, Int, Profits.) with the help of following data.

Particulars	(in crores.)
Sales	4000
Compensation of employees	800
Intermidiate consumption	600
Rent	400
Interest	300
Net Indirect Tax.	500
Consumption of fixed capital. (Dep.)	200

→ NDPFC = Compansation of employees + Op. Surplus + Mixed Income of Self employed

→ GDPmp = ~~4000~~ Sale - Intermidiate Consumption.
By value of output Added Method. = 4000 (-) 600
= ₹3400

NDPFC = GDPmp - Depⁿ - Net indirect Tax.
= 3400 - 200 - 500
= 2700

2700 = 800 + Op. Surplus + 400
Op. Surplus = ₹1500

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Homework.

Calculate ~~states~~ **sales** from the following data.

Particulars.	₹ in lakhs.
Subsidies	200
(IS) { Opening Stock.	100
(IS) { Closing Stock.	600
Intermediate Consumption.	3000
Consumption of fixed capital. (Dep.)	700
Profit	750
Net value added at factor cost.	2000

$$GVA_{mp} \text{ (GDP}_{mp}\text{)} = NVA_{FC} \text{ (NDP}_{FC}\text{)} + Dep^{n} + Indirect\ Tax - subsidies.$$
$$= 2000 + 700 + 0 - 200$$
$$= \boxed{2500\ ₹}$$

$$GVA_{mp.} = [Sales + change\ in\ stock.] - Intermediate\ consumption.$$
$$2500 = [Sales + 600 - 100] - 3000$$
$$(600 - 100 = 500)$$

$$\boxed{Sales = ₹\ 5000} \quad (5000\ Lakh..)$$

2. Income Method. → Factor Income method / Distributed Share method.

↳ whatever is produced by a producing unit is distributed among factors of production.

NDP_{FC}.

↳ Sum of factor incomes Paid out by all Production units within domestic territory of a country.

Income from property ← ↳ Compensation of employees
Income from entrepreneurship (+) operating Surplus. [Rent + Int + Profit]
(+) Mixed income of self employed.

Imp. (1.) Compensation of Employees. (2 TF 1 SE)

(a) pension of Retired Workers are not included.

(b) Compensation of Employees includes.

(i) Wages & salaries
(ii) Bonus
(iii) Dearness allowance. [DA]
(iv) commission.
(v) Employees constribution to provident funds.

Rough Salary = ₹100.

Employer.

employees contribution = (@12) (PF) 88 ✓ + 12 ✓ contribution.

(vi) Imputed value of compensation in Kind
↳ estimated.

(ie) car, Laptop, mobile.

जिस भी method में Goods & services की value का total करता है उससे मुझे GDPmp मिलता है
(ie) Production Method, Expenditure Method

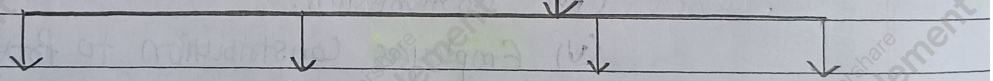
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(2.) Int. paid by Govt. on public debt } Transfer Income will be not included.

(3) Capital gains, Windfall profits (← Lotary.), transfer Incomes & Income from Sale of second hand goods, not included.
↳ However, Commission, brokerage will be included.

3) Expenditure METHOD.
↳ Income Disposal method.

GDPmp = Σ final Expenditure.
↳ Total amt. of spending on goods & services produced within Domestic territory.



1. Consumption Expenditure : Total spending on goods & services for final use.

a] Private final Consumption exp: [PFCE]
↳ Total Spending by household & non-profit institution serving.
Household (Ex) = food, clothing, education, etc.

→ It also includes the value of Primary goods which are produced for own consumption by households.
उगाना garden में सब्जी उगाई

→ Land & Residental building's purchased or constructed by household not part of PFCE
↳ Included in Investments.

b] Govt. final consumption Exp.
↳ Exp. made by Govt.

On providing public services such as Defense, education, healthcare, etc.

→ Govt. expense on pension, Scholarships, etc. Should be excluded bcz these are transfer Payments.

2. Investment.

Gross Domestic Capital Formation → Gross Investment.

→ Country's total expenditure which is not consumed but added to Nations fixed Asset & Stock.

1. Gross Business fixed Investment: Spending on cap. goods such as Machinery equipment

2. Inventory Investment: ↳ Change in Inventories
Cl. stock - Op. stock.

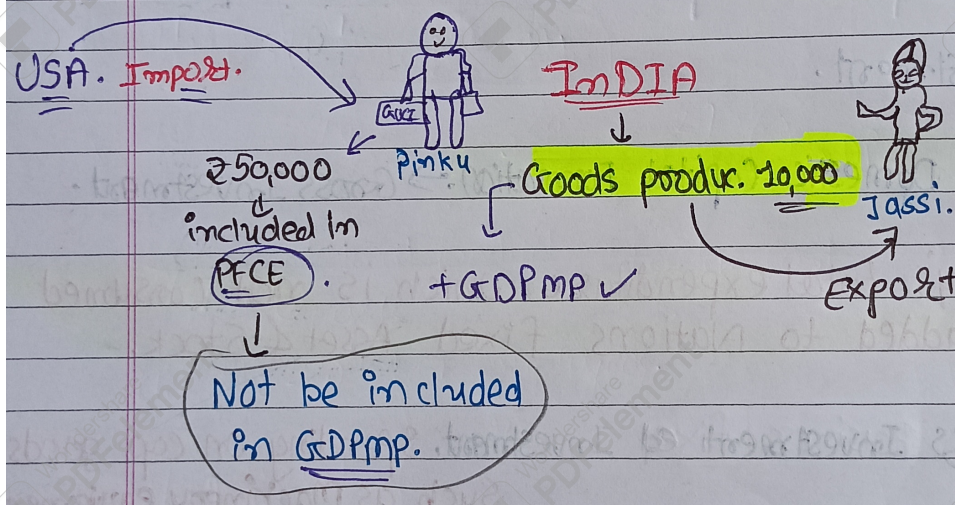
3. Household Investment:- Amt Spent on building of housing unit, acquisition of valuables.
↳ Jewellery Purchase

4. Public Investment : All. Investment by Govt. such as Roads, hospital etc.

→ Net Domestic Captial ~~formation~~ formation. = Gross Domestic cap. formation
Net Investment. (-> Dep.
(Consumption fixed capital)

3. Net Exports (Export - Import)

Expenditure by forcing entities on domestically Produced ~~goot~~ goods or services.....



GDPmp = Final Consumption Exp
+ Gross Domestic capital formation.
+ Net Export (Export - Import.)

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* ILLUSTRATION = 13.

Calculate National Income (NNPFC) with the help of Expenditure Method and Income Method. with the help of following data. (NDPFC + NFIA)

items.	₹ in crores.
Compensation of employees	+ 1200
Net Factor Income from Abroad.	+ 20
Net Indirect taxes	120
Profit	+ 800
Private final consumption Expenditure.	2000
Net domestic Capital Formation (Gross Domestic Capital Formation)	770
Consumption of fixed capital	130
Rent	+ 400
Interest	+ 620
Mixed income of self-employed	+ 700
Net export	30
Govt. final consumption Expenditure	1100
Operating surplus	1820
Employer contribution to social security scheme.	30

Income method.

NDPFC = 1200 + 700 + 1820.
(Co. employ, Mixed S.E., O.S.)
= 3720.

NNPFC = NDPFC + NFIA.
= 3720 + 20
= 3740

Expenditure Method. (NI).

GDP_{mp} = PFCE + Gross D.C. formation + GFCE.

= 200 + [770 + 130] + 1100

= 4030.

NNP_{FC} = GDP_{mp} − Depⁿ + NFIA − NIT.

= 4030 − 130 + 20 − 120

= 3800

* ILLUSTRATION = 14

∴ From the following data (items) calculate (i) GDP_{FC} (ii) GDP_{mp}. (₹ in cr)

~~Gross National Product at factor cost~~	~~61,500~~
Net exports	-50
Compensation of Employees.	3000
Rent	800
Interest	900
Profit	1300
Net Indirect taxes	300
Net Domestic capital formation	800
Gross Domestic Capital Formation. (100 Depⁿ)	900
Factor Income to abroad.	80

Income Method:

Compensation of employ. OIS.

$NDP_{FC} = 3000 + 800 + 900 + 1300.$

$= ₹6000$

$GDP_{FC} = NDP_{FC} + Depn.$

$= 6000 + 100$

$= 6100$

$GDP_{MP} = GDP_{FC} + NIT.$

$= 6100 + 300$

$= ₹6400$

* ILLUSTRATION = 15

Calculate NNP_{FC} By Expenditure method with the help of following data.

Net export → Export - Imp. (20)

Items	₹ in crores.
Private final consumption Expenditure	40
Net Import Net_{Import} → Import - Export = →	20
Public final consumption Expenditure	5
Gross domestic fixed capital formation - FA	350
Depriciation	30
Subsidy	100
Income paid to abroad.	20
Change in Stock.	30
Net acquisition of valuables.	10

$GDP_{MP} = PFCE + Net\ Export + PFCF + GDFCF + CIS + NAV$

$= 10 + (20) + 5 + 350 + 30 + 10$

$GDP_{MP} = 385$

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$NNP_{FC.} = GDP_{MP} - Dep^{n} + NFIA - NIT.$

$= 385 - 30 + 100 - 20.$

Income paid to abroad.

$= 435$