M.Com. Regular -II

2.0 National Income Concepts - GNP, GDP & NDP

Q:1 Explain the Concepts of GNP, GDP and NDP?

(A) Gross National Product (GNP) :-

"GNP means the money value of final goods and services Produced by Country's factors of production during a year"

$$GNP|GNI = C+I+G+(x-m)+(R-P)$$
$$GNP = GDP+(R-P)$$

Net Factor income From Abroad (R-P) :- Some of Country's national output is produced by foreign firms or Foreigners. Similarly some of domestic factors are Producing output in foreign countries. The difference between above two measures is known as Net factor income from Abroad (R-P).

R = Income Received by Domestic Factors

P = Payment made to Foreigners.

In Closed economy GNP = GDP = C+I+G But in Open economy GNP = C+I+G+(x-m)+(R-P).

IF Net Factor income is Positive (R>P), then GNP is greater than GDP.

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If Net factor income from abroad is Negative (R<P), then GNP will be Less than GDP.

(B) Gross Domestic Product (GDP) :-

GDP means the money value of final goods and Services Produced within the domestic territory of the Country during a given period of time".

GDP is the out put Produced within domestic territory of the country.

Domestic Territory includes ⟶

1) Territory lying within the Political boundaries including territorial waters of the Country.
2) Ships and Aircrafts Used by People of the Country.
3) Fishing Vessels, Oil and Natural gas Rigs and Floating Platforms used by People of the Country
4) Embassies, Consulates and Military establishments of the Country located abroad.

GDP in Closed Economy :- An closed economy Country has no relation with other Countries.

$$GDP = C+I+G$$

GDP in Open Economy :- An open economy Country is related with other Countries through Export and Import.

$$GDP = C+I+G+(X-M)$$

(C) Net Domestic Product (NDP) :-

Net domestic Product is calculated when Depreciation is deducted from GDP.

Depreciation is a Capital Consumption, it means wear and tear cost in the process of production. Provision of Depreciation is necessary to maintain Productive Capacity in Long Run.

Example → IF Lifespan of a machinery is 10 years, then firm has to make a Provision of 10% of its value as Depreciation so that after 10 years firms have enough funds available to replace it machinery.

Thus- **NDP = GDP - Depreciation**

Q:2

GNP	GDP
1. **Meaning :-** "GNP is the total market value of all final goods and services produced in a country during a year."	1. "GDP is the total market value of all the goods and services produced within the boundaries of a country."
2. **Formula :-** GNP = C + I + G + (X-M) + (R-P)	2. GDP = C + I + G + (X - M)
3. **Income From Abroad :-** It include Net income From Abroad.	3. It does not include income From Abroad

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GNP	GDP
4. **Concept** :- It is wider concept	4. It is narrow concept
5. **Larger/smaller** :- GNP will be Larger than GDP when Net Factor income is Positive (R > P)	5. GDP will be Larger than GNP when Net Factor income is Negative (R < P).

Q:3 GDP	NDP
1. **Meaning**:- "GDP is the total market Value of all goods and services Produced with in the boundaries of a Country."	1. "When Depreciation is deducted From GDP then we get NDP"
2. **Formula**:- $GDP = C + I + G + (x - m)$	2. $NDP = GDP - Depreciation$
3. **More/Less** :- GDP is more than NDP.	3. NDP is Less than GDP.
4. **Concept** :- GDP is wider Concept to measure Progress and development of country.	4. NDP is a narrow Concept
5. **Gap between GDP & NDP** :- A Growing gap between GDP & NDP Shows that Capital stock of Country is Decreasing	5. Reducing gap between GDP and GNP shows that Capital stock of Country is improving.

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Q:4 Explain the relationship between Real and Nominal Income?

(A) **Real and Nominal Income :-** Real income is also known as Real wage. Real income means how much money an individual or firm makes after adjusting for inflation. But Nominal income do not have any adjustement with inflation.

Real income is an economic measure that shows individual's actual Purchasing Power in the open market after accounting for inflation.

Nominal Income is not adjusted to account for Fluctuating Prices and Living costs.

National Income is the sum total of income received by all the Peoples for their services given.

A national income is increasing every year. It may be due to more Production of goods and services or due to increase in Price of goods and services.

Thus, growth of National Income at Constant Price is the Real Income whereas at Current Prices is Nominal Income.

(B) **Inflation and Price Index :-** Inflation means rise in the Price level which reduce Purchasing Power of People.

Main Features of Inflation

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1. Inflation is a Long term process of rise in Price level.
2. It is a Condition of disequilibrium.
3. It is Pure monetary concept.
4. Inflation is dynamic in nature.
5. Inflation occurs due to shortage or scarcity.
6. Real inflation takes place only after Full employment.
7. Inflationary Prices are mostly stable and irreversible
   (e.g) Price of Petrol, Gold etc.
8. Inflation is statistically measured in terms of Price Index during a given Period.

$$\text{Rate of Inflation} = \frac{\text{Change in Price}}{\text{Previous Price}} \times 100$$

$$= \frac{\Delta P_t}{P_{t-1}} \times 100$$

Example → Price Index in 2017 = ₹ 100
Price Index in 2018 = ₹ 110

$$\therefore \text{Rate of inflation} = \frac{110-100}{100} \times 100$$

$$= 10\%$$

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© GDP Deflator :-

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

" GDP Deflator is a Ratio of Nominal GDP to Real GDP "

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GDP deflator helps us to find out the real GDP from nominal GDP.

"Nominal GDP means the Value of goods and services at Current Prices".

"Real GDP means the Value of goods and services at Constant Prices."

"The difference between Nominal GDP and Real GDP is the Price of GDP which is called GDP deflator"

Example :- India Produced 1000 Quintals of Rice in 2017

Its market Price = ₹4000 Per Quintal.

∴ Total Market Price = 1000 × ₹4000 = 40,00,000 (2017)

In 2018, India Produced 1100 Quintals of Rice and its market Price = ₹5000 Per Quintal.

∴ Total Market Price = 1100 × ₹5000 = ₹ 55,00,000 (2018)

Real increase in the GDP on the basis of 2017 Price

= 1100 Quintals × ₹4000 = 44,00,000 → Real GDP

But Nominal GDP in 2018 ⟶ ₹ 55,00,000

$$\therefore \text{GDP Deflator} = \frac{\text{GDP at Current Prices (Nominal)}}{\text{GDP at Constant Prices (Real)}} \times 100$$

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$$= \frac{55,00,000}{44,00,000} \times 100$$

GDP Deflator = 125

GDP deflator is used to calculate inflation Rate.

Q:5 Explain the relationship between Nominal and Real Interest ?

(A) Nominal and Real Interest :- Interest is the Price Paid For the Use of money. when we pay price for borrowed money is called interest.

Example:- ₹ 10,000 is deposited in the bank at the rate 8% After one year we receive Rs. 10,800, then ₹ 800 is the Nominal rate of interest.

"A nominal interest rate means the interest rate before taking inflation into account."

"A Real Interest Rate is an interest rate, that has been adjusted to remove the effects of inflation to show the real cost of borrowed Funds"

Example:- A Person Purchase 5 kgs. of Apple for ₹ 1000. After one year he get ₹ 1080 at 8% interest and he can Purchase 0.4 kg. more apples. It is Real gain or Real interest which is equal to Nominal Rate of interest.

But suppose price of apples increase by 5% due to inflation. then Real interest is 8% - 5% = 3%

Thus - **Real Interest Rate = Nominal Interest Rate − InFlation Rate**

Real interest rate shows additional Purchasing Power.

(e.g) If Banks pay 8% interest on fixed Deposit but inFlation increase by 5% then depositer get 8% - 5% = 3%

as Real interest Rate.

But in Long-Run, The Nominal rate of interest should be adjusted to the rate of inflation to get Real interest Rate. It is called Fisher Effect.

Nominal Interest Rate = Real Interest Rate + Inflation Rate

Q:6 State with Reasons whether the following statements are True or False :—

1. GNP is equal to C+I+G+(X-M)+(R-P)

Ans:- True Reasons - Q:1 - A - Part.

2. GDP include income earned by all the nationals.

Ans:- False. Reason - Q:1 - B Part

3. GDP - Depreciation = NDP.

Ans:- True. Reason - Q:1 - C Part

4. National income at the current Price is Real income.

Ans:- False. Reasons - Q:4 - A Part

5. GDP deflator is used to workout Real GDP.

Ans:- True. Reasons - Q:4 - C-Part

6. Real interest Rate = Nominal Rate of interest - Inflation Rate.

Ans:- True. Reasons - Q:5 A Part

Q:7 Select the Correct answer and rewrite the statement:

1. GNP includes (R-P)

a) Factoral Receipts b) Factoral Payment © R-P

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2. GDP in a Closed economy consist of **b = C+I+G**

a) C+I+G+(X-M) b) C+I+G.

c) C+I+G+(X-M)+(R-P)

3) Real income is worked out on the basis of **Constant Price.**

a) Current Price b) Constant Price c) Both.

4) GDP deflator tells us the **b- Real Progress.**

a) Nominal Progress b) Real Progress

c) Real deflation in the economy.

5) Real Interest rate explains us a change in **a- Purchasing Power**

a) Purchasing Power b) money value c) The rate of inflation

Q:8 Match the following statements :—

1. GNP → C+I+G+(X-M)+(R-P)
2. GDP in Closed economy → C+I+G
3. NDP → GDP - Depreciation
4. GDP deflator → $\frac{\text{GDP at Current Price}}{\text{GDP at Contant Price}} \times 100$
5. Real Income → Income at Constant Price

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