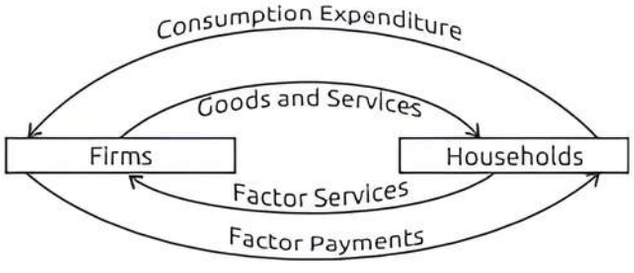
1 National Income and Related Aggregates

Fastrack Revision

- **Macroeconomics:** It is the study of aggregates relating to the whole economy, such as income and employment, aggregate demand, aggregate supply, government budget, etc.
- **Circular Flow of Income:** The flow of income across different sectors of the economy *viz.* firms and households is called circular flow of income. It is also known as unending flow of income and expenditure in an economy.
- **Circular Flow of Income in a Two Sector Economy:** Households are owner of factors of production, they provide factor services to the firms. Firms provide factor payments in exchange of their factor services. So, factor payments flow from firms to households.

  Households purchase goods and services from firms for which they make payment to them. So, consumption expenditure flows from households to the firms.



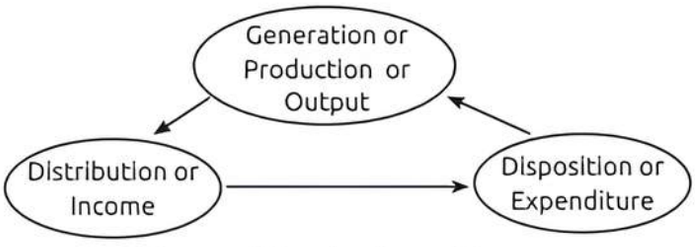
COMMON ERROR

Generally, students get confused and draw improper directions of flow.

TiP

Understand the direction of circular flow of income and practice the diagram.

- **Phases of Circular Flow of Income:** There are three different phases in the circular flow of income which are as follows:
  - **Phase I—Generation or Production or Output Phase:** In this phase, firms produce goods and services with the help of factor services.
  - **Phase II—Distribution or Income Phase:** In this phase, firms distribute income in the form of rent, wages, interest and profit to the factors of production.
  - **Phase III—Disposition or Expenditure Phase:** In this phase, the income received by the factors of production is spent on goods and services produced by firms.



Phases of Circular Flow of Income

- **Types of Circular Flow of Income:** There are two types of circular flow of income:
  - **Real Flow:** It is the flow of goods and services between firms and households.
  - **Money Flow:** It is the flow of income between firms and households.

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- *Withdrawal from the circular flow is called Leakages.*
- *Addition to the circular flow is called Injections.*

- **Final Goods:** Final goods are those goods which are used either for consumption or for investment.

  For example, vegetables purchased by households for consumption.
- **Intermediate Goods:** Intermediate goods are those goods which are used either for re-sale or for further production in the same year. For example, vegetables purchased by a restaurant.

  We can identify intermediate goods and final goods on the basis of its end-use.
- **Consumption Goods:** These are those goods which directly satisfy human wants. For example, bread, butter, etc. Consumption goods are sub-divided into following categories:
  - **Durable Consumer Goods:** They refer to those goods which can be used again and again for several years and are of relatively high value. These goods has certain life span. For example, washing machines, televisions, refrigerators, DVD players, etc.
  - **Semi-durable Goods:** Those goods which can be used for a period of one year or slightly more. For example, clothes, crockery, shoes, etc.
  - **Non-durable Goods:** Those goods which have a very short life span and mostly get exhausted in a single use. For example, milk, bread, foodgrain, paper, etc.

- **Services:** The non-material goods which directly satisfy human wants are called services. For example, services of doctors, teachers, lawyers, etc.

- **Capital Goods:** These are those goods which indirectly satisfy human wants. For example, machinery, equipments, etc.

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Producer goods include both raw material as well as fixed assets whereas capital goods include only fixed assets. Therefore, all capital goods are producer goods whereas all producer goods are not capital goods.

- **Transfer Income:** It refers to income received without rendering any productive service in return. For example, charity.

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Factor income is a bilateral concept. Transfer income is a unilateral concept.

- **Stock Variable:** It refers to that variable which is measured at a particular point of time. For example, national wealth.
- **Flow Variable:** It refers to that variable which is measured over a specific period of time. For example, national income.
- **Depreciation (consumption of fixed capital):** It refers to a decrease in the value of fixed assets due to normal wear and tear, passage of time and expected obsolescence or change in technology. It is also known as consumption of fixed capital. Depreciation is not related to unexpected obsolescence.
- **Investment:** Investment or capital formation refers to addition made to the stock of capital in the economy. For example, construction of buildings, purchase of machinery, addition to inventories of goods, etc.
  Investments are of two types:
  - **Gross Investment:** The total addition made to the capital stock of economy in a given period is termed as gross investment.

$$\text{Gross Investment} = \text{Net Investment} + \text{Depreciation}$$

  - **Net Investment:** The actual addition made to the capital stock of economy in a given period is termed as net investment.

$$\text{Net Investment} = \text{Gross Investment} - \text{Depreciation}$$

- **Normal Resident of a Country:** A normal resident is defined as a person or an institution who ordinarily resides in a country for a period of at least one year or more and whose centre of economic interest lies in that country. There are three types of normal residents:
  - Nationals of a country residing in the country of which they are the nationals, such as Indians living in India.
  - Nationals of a country living temporarily abroad (for less than one year) but their centre of economic interest lies in the country of which they are the nationals, such as Indians living temporarily in the foreign countries.
  - Foreigners living in a country for more than one year.
- **Exceptions to the Normal Residents:** The following persons or institutions are not treated as normal residents of a country where they are living or located:
  - Foreign staff of embassies and consulates and members of foreign armed forces located in the country.
  - Foreign visitors or tourists visiting the country for higher studies, medical treatment, sports, etc. They are the residents of their respective countries.
  - International organisations such as World Bank, WHO, IMF, etc. They fall under international area.
  - The crew members of foreign ships and aircrafts.
- **Net Factor Income from Abroad (NFIA):** It is the difference between factor income received from abroad by the normal residents of the country for rendering factor services and the income paid for the factor services rendered by the non-residents within the domestic territory of a country.

$$\text{NFIA} = \text{FIFA} - \text{FITA}$$

  where, FIFA = Factor Income from Abroad,
  FITA = Factor Income to Abroad
- **Components of NFIA:** There are three main components of NFIA which are as follows:
  - **Net Compensation of Employees:** It refers to the difference between income from work received by resident workers from abroad and similar payments made to the non-residents.
  - **Net Income from Property and Entrepreneurship:** It refers to the difference between income from property and entrepreneurship (in the form of rent, interest and profit) received by the residents of the country and similar payments made to the rest of the world.
  - **Net Retained Earnings:** It refers to the difference between retained earnings of the resident companies located abroad and retained earnings of non-resident companies located within the domestic territory of the country.
- **Net Indirect Taxes (NIT):** It refers to the difference between indirect taxes and subsidies.

$$\text{NIT} = \text{Indirect Taxes} - \text{Subsidies}$$

- **Gross Domestic Product (GDP):** It is the sum total of all goods and services produced within the domestic territory of the country by the residents of a country.
  - **Types of GDP:** GDP are of two types:
    - **Nominal GDP or GDP at Current Price:** It refers to the production of goods and services valued at current prices.
    - **Real GDP or GDP at Constant Price:** It refers to the production of goods and services valued at constant prices.
- **GDP Deflator:** GDP deflator measures the average level of prices of all the goods and services that make up GDP. It is used to eliminate the effect of price changes and to determine the real change in physical output.

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

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GNP deflator can be calculated as:

$$\text{GNP Deflator} = \frac{\text{Nominal GNP}}{\text{Real GNP}} \times 100$$

- **National Income (NI):** It refers to the money value of all final goods and services produced by normal residents of a country during an accounting year. It includes net factor income from abroad. It is also referred to as Net National Product at Factor Cost (NNP_{FC}).
- **National Income at Current Price and Constant Price**
  - **National Income at Current Price:** It is the money value of goods and services produced in a year, measured at the prices of the current year.

➤ **National Income at Constant Price:** It is the money value of goods and services produced in a year, measured at a constant price, *i.e.* price of a chosen year (called base year).

Eight Related Aggregates to GDP and National Income

S. No.	Related Aggregate	Depreciation/ Consumption of Fixed Capital	NFIA	NIT
1.	GDP_{MP}	Includes	Excludes	Includes
2.	GDP_{FC}	Includes	Excludes	Excludes
3.	GNP_{MP}	Includes	Includes	Includes
4.	GNP_{FC}	Includes	Includes	Excludes
5.	NDP_{MP}	Excludes	Excludes	Includes
6.	NDP_{FC}	Excludes	Excludes	Excludes
7.	NNP_{MP}	Excludes	Includes	Includes
8.	NNP_{FC}	Excludes	Includes	Excludes

▸ **Methods of Measuring National Income:** There are three methods of measuring national income:

➤ **Value Added/Production Method/Output Method:** The following steps are followed to compute NI:

- Value of Output = Sales + Change in Stock
- Gross Value Added at Market Price (GVA_{MP}) = Value of Output – Intermediate Consumption
- Net Value Added at Market Price (NVA_{MP}) = GVA_{MP} – Depreciation
- Net Value Added at Factor Cost (NVA_{FC}) = NVA_{MP} – Net Indirect Taxes (Indirect Tax – Subsidies)
- Net National Product at Factor Cost (NNP_{FC}) = NVA_{FC} + NFIA (Factor Income from Abroad – Factor Income to Abroad)

➤ **Types of Value Added Methods:** Two methods are used:

- **Final Output Method:** According to this method, the value of only final goods should be added to determine the national income.
- **Value Added Method:** According to this method, sum total of the value added by each producing unit should be taken in the determination of National Income.

➤ **Precautions of Value Added Method**

- Intermediate goods are not included.
- Sale and purchase of second-hand goods is not included.
- Domestic services are not included.
- Production for self-consumption will be included.
- Imputed value of owner-occupied house should be included.
- Change in stock of goods (inventory) will be included.
- Avoid double counting.

➤ **Income Method:** The following steps are followed to compute NI:

- Compensation of Employees = Wages and Salaries + Employer's Contribution to Social Security Scheme
- Operating Surplus = Rent + Interest + Royalty + Profit
- NDP_{FC} = Compensation of Employees + Operating Surplus + Mixed Income of Self-employed
- National Income/NNP_{FC} = NDP_{FC} + NFIA

➤ **Precautions of Income Method**

- Transfer Incomes will not be included.
- Income from sale of shares and bonds are not included.
- Employees contribution to social security scheme will be not included.
- Commission on sale of shares, bonds is included.
- Wind fall gains such as lottery income will not be included.
- Imputed value of services provided by owners of production units will be included.
- Payments out of past savings are not included.
- Retirement pension is included in national income.

➤ **Expenditure Method:** The following steps are followed to compute NI:

- GDP_{MP} = Private Final Consumption Expenditure + Government Final Consumption Expenditure + Gross Domestic Capital Formation + Net Exports

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Gross Domestic Capital Formation: *It includes expenditure on the purchases of final goods by the producers. The investment expenditure is of two types:*

- ***Gross Domestic Fixed Investment:*** *It refers to expenditure on purchasing fixed assets like machinery by producers. It includes net factor income from abroad.*
- ***Change in Stock/Inventory Investment:*** *It is estimated as:*

  Change in Stock = Closing Stock – Opening Stock
- *Net Export → It is estimated as: Export – Import*

- NDP_{MP} = GDP_{MP} – Depreciation
- NDP_{FC} = NDP_{MP} – NIT
- NNP_{FC} = NDP_{FC} + NFIA

➤ **Precautions of Expenditure Method**

- Expenditure on intermediate goods will not be included.
- Transfer payments are not included.
- Expenditure on second-hand goods will not be included.
- Expenditure on shares and bonds are not included.
- Expenditure on own account production will be included.

▸ **GDP and Welfare:** It is not a measure of welfare due to the reasons stated below:

➤ **Composition of GDP:** GDP does not tell about the type and structure of goods and services produced in the economy. So, when GDP of a country increases mainly due to the production of war equipments and ammunition instead of production of machinery and capital equipments, then such an increase in GDP will not promote welfare in the country. So, GDP is not a satisfactory measure of economic welfare.

➤ **Inflation or Rise in General Price Level:** GDP of a country can be increased due to an increase in physical output, increase in general price level or both.

However, when GDP of a country increases only due to an increase in physical output, then it shows economic growth.

But, if the GDP of the country increases mainly due to a rise in general price level and not due to increase in physical output, then such an increase in GDP will not promote welfare in the country. So, GDP is not a satisfactory measure of economic welfare.

- **Non-monetary Exchanges:** GDP tells us about the total money value of goods and services produced in the country during a period of one year. GDP does not tell anything about the non-monetary transactions which promote social welfare. For example, services of housewife, kitchen gardening, leisure time activities, etc. GDP does not consider them because they are not measured in terms of money. So, they are not recorded in the books of account of non-availability of data. GDP ignores such welfare promoting activities. So, GDP is not a satisfactory measure of economic welfare.
- **Distribution of GDP:** GDP tells about the total money value of goods and services produced in the country during a period of one year. GDP does not tell about the distribution of income in the economy.
  So, when GDP of a country increases and is distributed in such a manner that rich becomes more rich and poor becomes poorer, then such an increase in GDP will not promote welfare in the country. So, GDP is not a satisfactory measure of economic welfare.
- **Externalities:** It refers to benefits or harms of an activity caused by a firm or an individual, for which they are not paid or penalised. For example, environmental pollution caused by industrial plants. It can be of two types:
  - **Positive Externality:** It is a benefit that accrues to an individual or society for which he has to pay nothing.
  - **Negative Externality:** It is a harm that accrues to an individual or society for which they cannot claim compensation.

- **Which is Better: Nominal GDP or Real GDP?**
  - Real GDP is a better measure to compare the changes in the physical output of goods and services over different years.
  - Nominal GDP can increase even without any increase in the physical output as it is affected by change in prices also. However, Real GDP is affected by change in the physical output only as prices are kept fixed or constant.
  - Real GDP is often used to compare the economic performance of different countries.

Therefore, Real GDP is better than Nominal GDP as it truly reflects the growth of the economy.

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Economic agents are those individuals or institutions which take economic decision, i.e., government, co-operation, banks, etc.

Practice Exercise

Multiple Choice Questions

Q 1. Why are the intermediate goods not included in the National Income while measuring National Income?
a. To avoid double accounting
b. It decreases income
c. Intermediate goods are not good
d. All of the above

Q 2. Increase in Stock of Capital is known as:
a. Capital loss
b. Capital profit
c. Capital formation
d. None of these

Q 3. Aggregation is involved in:
a. Microeconomics
b. Macroeconomics
c. Both a. and b.
d. None of the above

Q 4. Method of study in microeconomics and macroeconomics respectively:
a. general equilibrium and partial equilibrium
b. partial equilibrium and general equilibrium
c. Both a. and b.
d. None of the above

Q 5. Central issue of macroeconomics:
a. determination of price
b. determination of overall level of output
c. Both a. and b.
d. None of the above

Q 6. Economic agents are those who take economic decisions and include:
a. RBI
b. SEBI
c. TRAI
d. All of these

Q 7. Macroeconomics variables include:
a. consumption expenditure in the economy
b. investment expenditure in the economy
c. national income
d. All of the above

Q 8. Macroeconomics study includes except:
a. money and banking
b. government budget and the economy
c. theory of production
d. determination of income and employment

Q 9. Monetary and fiscal policies of the government are a part of:
a. microeconomics
b. macroeconomics
c. Both a. and b.
d. None of these

Q 10. Unforeseen obsolescence of fixed capital assets during production is:
a. consumption of fixed capital
b. capital loss
c. income loss
d. None of the above

Q 11. Depreciation of fixed capital assets refers to:
a. normal wear and tear
b. foreseen obsolescence
c. Both a. and b.
d. unforeseen obsolescence

Q 12. Foreign Embassies in India are a part of India's:
a. economic territory
b. geographical territory
c. Both a. and b.
d. None of these

Q 13. Goods purchased for the following purpose are final goods:
a. for satisfaction of wants
b. investment in firm
c. Both a. and b.
d. None of the above

Q 14. Which of the following is not a flow?
a. Capital
b. Investment
c. Income
d. Depreciation

Q 15. Which of the following is a stock?
a. Wealth
b. Exports
c. Savings
d. Profits

Q 16. Flow of goods and services and factors of production across different sectors in a Barter economy is known as:
a. Circular flow
b. Real flow
c. Monetary flow
d. Capital flow

Q 17. Inventory is a ..... concept, whereas change in inventory is a ..... concept. *(CBSE SQP 2020)*
a. stock, flow
b. flow, stock
c. stock, stock
d. flow, flow

Q 18. The components of NFIA are:
a. net compensation of employees
b. net income from property and entrepreneurship
c. net retained earnings
d. All of the above

Q 19. With a rise in real national income, welfare of the people: *(CBSE 2018)*
a. rises
b. falls
c. remains unchanged
d. None of these

Q 20. According to a report forwarded by RBI, there was a fall in rate of inflation as measured by Consumer Price Index (CPI) on year-to-year basis to 5% from 8% in the previous year. Which of the following statements represents the situation? *(CBSE 2019)*
a. CPI has fallen
b. CPI has risen
c. CPI is constant
d. None of these

Q 21. The sum of factor payments is equal to: *(CBSE 2020)*
a. domestic income
b. national income
c. per capita real income
d. per capita nominal income

Q 22. National income is the sum of factor income accruing to:
a. nationals
b. economic territory
c. residents
d. Both residents and non-residents

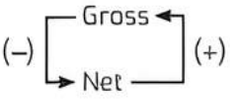
Q 23. Which one is not included in national income?
a. Wages in cash
b. Rent
c. Unemployment allowance
d. Mixed income

Q 24. Commission paid to dealer on sale and purchase of second hand goods is included in national income because:
a. it is income from copyrights
b. it is income for rendering productive services
c. it is part of operating surplus
d. All of the above

Q 25. For a closed economy (with no foreign trade), which one of the following is correct? *(CBSE SQP 2023-24)*
a. GDP = GNP
b. GDP > GNP
c. GDP < GNP
d. GDP + GNP = 0

Q 26. GDP deflator is same as:
a. Nominal GDP
b. Real GDP
c. Price index
d. None of these

Q 27. Identify the missing item in the flow chart.
a. Net Indirect taxes
b. NFIA
c. Depreciation
d. Intermediate consumption



Q 28. Which of the following flow chart is correctly established?

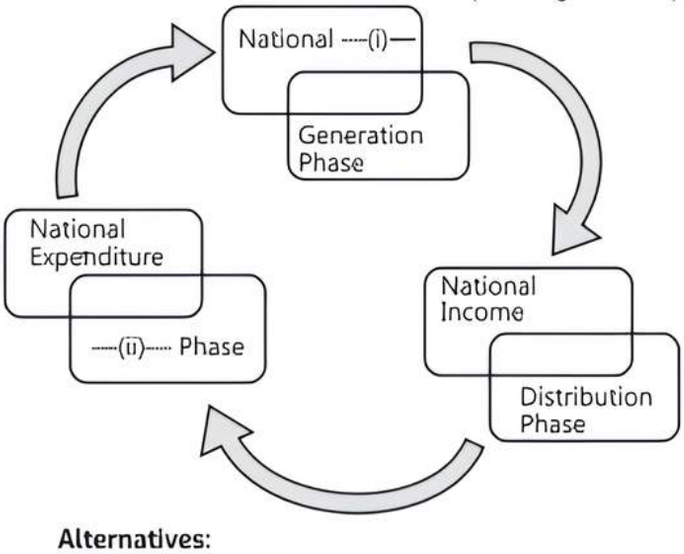
a. Gross → + Depreciation → Net

b. National Product → + NFIA → Domestic Product

c. Market Price → + NIT → Factor Cost

d. Indirect Taxes → – Subsidies → Net Indirect Taxes

Q 29. Read the following figure carefully and choose the correct pair from the alternatives given below: *(CBSE SQP 2022-23)*



Alternatives:
a. Output, Production
b. Value added, Production
c. Output, Disposition
d. Wealth, Development

Q 30. Purely financial transactions, not included in national income:
a. sale of shares and bonds
b. government transfer payments
c. old age pension
d. All of the above

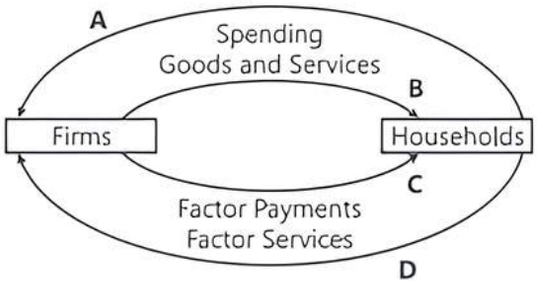
Q 31. **Which one out of the following is the best indicator of economic growth?**
a. Increase in GNP
b. Increase in GDP
c. Increase in real per capita GDP
d. Increase in per capita GDP

Q 32. **Complete the table:**

Producer	Value of Output	Intermediate Consumption	Value Added
Farmer	2000	—	2000
Baker	...(i)...	2000	2000
Retail Seller	4400	...(iii)...	400
Total	.....(ii).....	6000	...(iv)...

Alternatives: *(CBSE 2023)*
a. 4000, 10400, 4000, 4000
b. 4000, 10400, 4000, 4400
c. 2000, 6000, 6000, 4400
d. 4000, 10400, 6000, 4000

Q 33. **On the basis of the figure given below, identify the type of flow indicated by B and D:** *(CBSE SQP 2023-24)*
[Choose the correct alternative]



Alternatives:
a. Real flow
b. Money flow
c. Nominal flow
d. National flow

Statement Based Questions

Q 34. **Read the following statements carefully:**
Statement I: Net investment is a stock concept.
Statement II: Capital is a flow concept.
In the light of the given statements, choose the correct alternative from the following:
(CBSE SQP 2022-23)
a. Statement I is true and statement II is false.
b. Statement I is false and statement II is true.
c. Both statements are true.
d. Both statements are false.

Q 35. **Read the following statements carefully:**
Statement I: Domestic income is a territorial concept.
Statement II: Domestic income includes the value of final goods and services produced in the entire world.
In the light of the given statements, choose the correct alternative from the following:
a. Statement I is true and statement II is false.
b. Statement I is false and statement II is true.
c. Both statements are true.
d. Both statements are false.

Q 36. **Read the following statements carefully:**
Statement I: Money received from the sale of second-hand cars will be considered while estimating national income.
Statement II: Their value is already included and it does not contribute to the current flow of goods and services.
In the light of the given statements, choose the correct alternative from the following:
a. Statement I is true and statement II is false.
b. Statement I is false and statement II is true.
c. Both statements are true.
d. Both statements are false.

Q 37. **Read the following statements carefully:**
Statement I: Gross Domestic Product (GDP) is the sum total of the gross market value of all the final goods and services added by all the sectors in the economy during a fiscal year.
Statement II: Gross Value Added at Market Price (GVA_{MP}) is equal to the excess of value of output over intermediate consumption.
In the light of the given statements, choose the correct alternative from the following: *(CBSE 2023)*
a. Statement I is true and statement II is false.
b. Statement I is false and statement II is true.
c. Both statements are true.
d. Both statements are false.

Fill in the Blank Type Questions

Q 38. **Gross investment minus net investment is .....**
[Choose the correct alternative to fill up the blank]
a. Net Indirect Taxes
b. Depreciation
c. Subsidies
d. NFIA

Q 39. **..... is the gross market price of all final goods and services produced within the domestic territory of a country on an accounting year.**
[Choose the correct alternative to fill up the blank]
a. GDP_{MP} b. GNP_{MP} c. GDP_{FC} d. GNP_{FC}

Q 40. **The concepts of indirect taxes and subsidies are not relevant in a ..... sector economy but are relevant in three sector and four sector economy.**
[Choose the correct alternative to fill up the blank]
a. four
b. two
c. three
d. None of these

Q 41. **Expected obsolescence occurs due to change in technology, change in fashion. It is managed by making provision for ..... fund.**
[Choose the correct alternative to fill up the blank]
a. direct tax
b. depreciation
c. depreciation reserve
d. indirect tax

Q 42. **Rent + Interest + Royalty + Profit = ...**
[Choose the correct alternative to fill up the blank]
a. Compensation of employees
b. Compensation of employers
c. Mixed Income
d. Operating surplus

True/False Type Questions

Q 43. Inventory is a stock variable. *(CBSE 2020)*

Q 44. Capital formation is a flow.

Q 45. Total Investment (Gross Investment) can be equal to Actual Investment (Net Investment).

Q 46. Nominal GDP can never be less than Real GDP.

Q 47. Real GDP can be equal to Nominal GDP.

Match the Column Type Questions

Q 48. From the following statements given in Column I and Column II, choose the correct pair of statements:

Column I	Column II
A. General Theory of Employment, Interest and Money	1. 1929-33
B. An Enquiry into the Nature and Causes of Wealth of Nations	2. Oslo University
C. Ragnar Frisch	3. J.M. Keynes
D. Great Depression	4. Adam Smith

	A	B	C	D
a.	1	2	3	4
b.	4	3	2	1
c.	3	4	2	1
d.	2	1	4	3

Q 49. From the following statements given in Column I and Column II, choose the correct pair of statements:

Column I	Column II
A. Determination of Income and employment	1. Economic Agent
B. Allocation of resources	2. Both Microeconomics and Macroeconomics
C. Aggregation is involved	3. Microeconomics
D. TRAI	4. Macroeconomics

	A	B	C	D
a.	1	2	3	4
b.	4	3	2	1
c.	2	4	1	3
d.	1	3	4	2

Q 50. From the following statements given in Column I and Column II, choose the correct pair of statements:

Column I	Column II
A. Determinant to solve in microeconomics	1. Income
B. Perfectly inelastic supply	2. Keynesian school
C. Determinant to solve in macroeconomics	3. Price
D. Possibility of excess and deficient demand	4. Classical school

	A	B	C	D
a.	3	4	2	1
b.	1	2	3	4
c.	4	3	2	1
d.	2	4	1	3

Q 51. From the following statements given in Column I and Column II, choose the correct pair of statements:

Column I	Column II
A. Factor Income	1. Re-sale during the same accounting year
B. Final Goods	2. Unilateral concept
C. Transfer Income	3. Used for Investment purpose
D. Intermediate Goods	4. Bilateral concept

	A	B	C	D
a.	1	2	3	4
b.	4	3	2	1
c.	3	2	1	4
d.	3	4	1	2

Q 52. From the following statements given in Column I and Column II, choose the correct pair of statements:

Column I	Column II
A. Transfer payments made out of income of the payer are called	1. 100
B. Transfer payments made out of the wealth of the payer are called	2. –100
C. Factor Income to abroad is – ₹100 then NFIA is	3. Current transfers
D. Factor income to abroad is ₹ 100. then NFIA is	4. Capital transfers

	A	B	C	D
a.	4	3	2	1
b.	3	4	1	2
c.	1	2	3	4
d.	2	4	1	3

TiP

Always remember that when 'Factor income to abroad' is given, then NFIA is obtained by changing the sign (+ to –) and (– to +).

e.g., If factor income to abroad = 50, then NFIA = – 50

If factor income to abroad = – 50, then NFIA = +50

Q 53. From the following statements given in Column I and Column II, choose the correct pair of statements:

Column I	Column II
A. The total addition made to the stock of capital	1. Capital loss
B. The actual addition made to the stock of capital	2. Consumption of fixed capital
C. Expected obsolescence	3. Gross investment
D. Unexpected obsolescence	4. Net Investment

	A	B	C	D
a.	3	4	1	2
b.	1	2	3	4
c.	4	3	2	1
d.	2	1	4	3

Q 54. From the following statements given in Column I and Column II, choose the correct pair of statements:

Column I	Column II
A. Losses	1. Real flow
B. Amount of bank deposits as on 31.03.20XX	2. Nominal flow
C. Flow of goods and services between firms and households	3. Flow
D. Flow of money between firms and households	4. Stock

	A	B	C	D
a.	1	2	3	4
c.	4	3	2	1

	A	B	C	D
b.	4	2	1	3
d.	3	4	1	2

Q 55. From the following statements given in Column I and Column II, choose the correct pair of statements:

Column I	Column II
A. Vegetables grown in the personal garden	1. Non-marketing activity
B. A car used as a taxi	2. Consumer goods
C. An air conditioner used by household	3. Capital goods
D. Scholarship given to students by government	4. Factor income

Alternatives: *(CBSE 2023)*

a. A-1 b. B–2
c. C–3 d. D-4

Assertion & Reason Type Questions

Directions (Q.Nos. 56-65): *There are two statements marked as Assertion (A) and Reason (R). Read the statements and choose the appropriate option from the options given below:*

a. Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).
b. Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A).
c. Assertion (A) is true, but Reason (R) is false.
d. Assertion (A) is false, but Reason (R) is true.

Q 56. Assertion (A): Cotton textile industry is an example of microeconomics.

Reason (R): Because microeconomics deals with the individuals.

Q 57. Assertion (A): Income theory is another name of macroeconomics.

Reason (R): Because macroeconomics deals with the aggregates.

Q 58. Assertion (A): General equilibrium is concerned with macroeconomics.

Reason (R): Because macroeconomics deals with the aggregates and general equilibrium refers to simultaneous equilibrium in all markets.

Q 59. Assertion (A): A firm does not make any provision for depreciation.

Reason (R): Because depreciation is a foreseen loss.

Q 60. Assertion (A): Operating surplus is income from property (rent, royalty and interest) and income from entrepreneurship, *i.e.*, Profits (Dividends + Corporate Tax + Corporate Savings).

Reason (R): Operating surplus does not originate in general government sector as there is no income from property and entrepreneurship.

Q 61. Assertion (A): A normal resident is said to be a person or an institution who ordinarily resides or is located in a country and whose centre of economic interest lies in that country.

Reason (R): A person can be a citizen of a country and normal resident of some other country. For example, a large number of Indian nationals have settled in USA, England, etc. as residents and not as nationals.

Q 62. Assertion (A): Real flow is also known as physical flow.

Reason (R): Real flow involves flow of goods and services between firms and households.

Q 63. Assertion (A): Net indirect taxes increase the price of the commodity.

Reason (R): Net indirect taxes is included in market price of the commodity.

Q 64. Assertion (A): Capital loss is an unexpected loss.

Reason (R): Because we cannot predict the time of accident and natural calamities.

Q 65. Assertion (A): Stock variables are those variables whose quantity is measured at a point of time, *i.e.*, stocks are defined at a particular point of time.

Reason (R): We can measure a change in stock over a specified period of time. Such changes in stocks are flows. Flow variables are measured over a specified period of time.

Answers

1. (a) To avoid double accounting
2. (c) Capital Formation
3. (c) Both a. and b.
4. (b) partial equilibrium and general equilibrium
5. (b) determination of overall level of output
6. (d) All of these
7. (d) All of the above
8. (c) theory of production
9. (b) macroeconomics
10. (b) capital loss
11. (c) Both a. and b.
12. (b) geographical territory
13. (c) Both a. and b.
14. (a) Capital
15. (a) Wealth
16. (b) Real flow
17. (a) stock, flow
18. (d) All of the above
19. (a) rises
20. (b) CPI has risen
21. (a) domestic income
22. (c) residents

23. (c) Unemployment allowance
24. (b) It is income for rendering productive services
25. (a) GDP = GNP
26. (c) Price index
27. (c) Depreciation
28. (d) Indirect Taxes
– Subsidies
Net Indirect Taxes
29. (c) Output, Disposition
30. (d) All of the above
31. (c) Increase in real per capita GDP
32. (b) 4000, 10400, 4000, 4400
33. (a) Real flow
34. (d) Both statements are false.
35. (a) Statement I is true and statement II is false.
36. (b) Statement I is false and statement II is true.
37. (c) Both statements are true.
38. (b) Depreciation
39. (a) GDP_{MP}
40. (b) two
41. (c) depreciation reserve
42. (d) Operating surplus
43. True: Because it is related to a point of time.
44. True: capital formation is related to period of time.
45. True; Gross investment can be equal to net investment. This is possible only when the value of depreciation is zero.
46. False: Nominal GDP can be less than Real GDP, when current year prices are less than base year price.
47. True; It happens when prices are same in current year as well as in base year.

	A	B	C	D
48. (c)	3	4	2	1
49. (b)	4	3	2	1
50. (a)	3	4	2	1
51. (d)	3	4	1	2
52. (b)	3	4	1	2
53. (a)	3	4	1	2
54. (c)	4	3	2	1

55. (a) A–1
56. (a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).
57. (c) Assertion (A) is true, but Reason (R) is false.
58. (a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).
59. (d) Assertion (A) is false, but Reason (R) is true.
60. (b) Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A).
61. (b) Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A).
62. (a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).
63. (a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).
64. (a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).
65. (b) Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A).

Case Study Based Questions

Case Study 1

Read the extract given below and answer the questions on the basis of the same:

Atmanirbhar Bharat 3.0 takes Overall Economic Support to 15% of GDP: Nirmala Sitharaman Economists said the new package included the March allocation as well as liquidity measures announced by the Central Bank worth ₹ 6.5 lakh crore. Finance Minister Nirmala Sitharaman announced a third set of measures under the Government's Atmanirbhar Bharat package, aimed at rescuing the economy out of a *historic contraction* caused by the coronavirus pandemic. The latest steps including incentives on job creation and measures for the ailing economy's key real estate and infrastructure sectors — are estimated to cost the government ₹ 2,65,080 crore. *Source:* NDTV PROFIT, Nov. 12, 2020

Q 1. Economic support to GDP is required to recover economy out of..... in gross domestic product.
a. contraction
b. extension
c. increase
d. None of the above

Q 2. Injections in the economy are done by increased investments in:
a. employment generation sectors
b. infrastructure sectors
c. reality development sectors
d. All of the above

Q 3. Injections cause ..... impact on the process of production or income generation.
a. positive
b. negative
c. equal
d. None of these

Q 4. Injection in circular flow of income .....
a. exports
b. imports
c. taxation
d. All of these

Answers

1. (a) 2. (d) 3. (a) 4. (a)

Case Study 2

Read the extract given below and answer the questions on the basis of the same:

The Prime Minister pledged to make a self-reliant India or Atmanirbhar Bharat in May while announcing a comprehensive economic package to arrest the economic slowdown. Since then, the government has passed some key labour and farm reforms, among others. But much more is required to make India a self-reliant and competitive economy in the medium to long-term.

The bigger medium-term problem is the slowdown of aggregate demand—Private Final Consumption Expenditure (PFCE), investment and exports. The largest component of GDP, PFCE, has not only declined as a share of GDP—68% in 1990 to 56% of GDP in 2019 — but also in terms of growth rates in recent years. The consumption of the top socio-economic deciles has stagnated and the consumption demand of the rest of the demography — mostly in agriculture, small-scale manufacturing and self-employed—is not increasing due to low income growth. The investment slowdown is mostly due to a fall in household investment in the construction sector (almost 5% of GDP), affecting not only major industries like steel, cement and power but also income, employment and demand.

Source: Business Standard, Nov. 13, 2020

Q 1. To solve the problem of economic slowdown, fall in the level of ..... is the limitation to achieve self-reliance.

a. aggregate demand b. aggregate supply
c. excess demand d. excess supply

Q 2. Cause of slowdown of aggregate demand:

a. fall in consumption demand
b. fall in investment demand
c. fall in exports
d. All of the above

Q 3. Private final consumption expenditure measures the market value of goods and services purchased by households and non-profit institutions, serving .....

a. producer b. households
c. consumer d. seller

Q 4. Measurement of final expenditure by households, producers, government and rest of the world in domestic territory:

a. NNP_{FC} b. GNP_{FC}
c. GNP_{MP} d. None of these

Answers

1. (a) 2. (d) 3. (b) 4. (c)

Case Study 3

Read the extract given below and answer the questions on the basis of the same:

The latest increase in indirect taxes on commodities like diesel, petrol and alcohol by the Central and various State Governments is likely to lead to a further rise in the tax burden on India's Gross Domestic Product (GDP). In FY 19, Indirect taxes (net of subsidies) accounted for nearly 10% of GDP, up from 9.3% a year ago and a low of 6.1% in FY 10. This, say economists, will negatively impact household. Disposable income may hit consumer demand, savings and investments by the household.

A faster rise in tax burden led to a steady decline in the portion of gross domestic product that accrues to the household. Household disposable income was equivalent to around 85% of GDP in FY19 down from 85.5% a year ago and a high of 90 % in FY 09.

In the same period, India gross domestic product at current prices grew at a Compound Annual Growth Rate (CAGR) of 11% while private final consumption expenditure grew at a CAGR of 11.7 % while household savings grew at a CAGR of 8.6%.

"In general household held-up the consumption by cutting back of savings and increase in borrowings that showed-up in a boom in retail credit in the economy", says Dhananjay Sinha, head research Systematix Group.

Source: Business Standard, May 11, 2020

Q 1. Increase in indirect taxes on goods will cause decrease in .....

a. national income b. monthly income
c. disposable income d. None of these

Q 2. Consumers' tendency to demand more for consumption in spite of increase in tax burden is due to:

a. reduction in savings b. rise in borrowings
c. Both a. and b. d. Neither a. nor b.

Q 3. Difference between indirect taxes and subsidies represents .....

a. indirect taxes b. net indirect taxes
c. gross indirect taxes d. None of these

Q 4. Subsidies are financial assistance by government to an enterprise which is given:

a. as compensation for selling goods below open market price
b. to encourage exports
c. to encourage employment
d. All of the above

Answers

1. (c) 2. (c) 3. (b) 4. (d)

Case Study 4

Read the extract given below and answer the questions on the basis of the same:

The COVID-19 Pandemic, which is also known as 'The Great Recession' by economists worldwide is often compared to past recessionary periods in

order to gauge the extent to damage it can leave in its path. As per IMF's World Economic Outlook Report for June 2020, the global economy is one of these comparisons goes back to 'The Great Depression of 1929', a rare comparison when talking about any recessionary period.

The Great Depression began in US in 1929, its impact spread to the rest of the world and remained until 1939. The Depression began on 24th October, 1929 (Black Thursday) when Wall Street witnessed a tremendous crash at New York Stock Exchange as stock prices fell by about 25% in a day.

Q 1. The COVID-19 Pandemic brought economies of the world to .....

a. recession b. depression
c. boom d. None of these

Q 2. The economic situation caused by COVID-19 Pandemic is compared to the Great Depression of 1929 because both of them caused:

a. fall in output levels
b. accumulation of stocks
c. fall in demand levels
d. All of the above

Q 3. Prior to the Great Depression, it was believed that economy is always at ..... employment equilibrium.

a. full b. under
c. over d. None of these

Q 4. After the Great Depression, it was accepted that government does interfere when there is either .....

a. excess demand b. deficient demand
c. Both a. and b. d. None of these

Answers

1. (a) 2. (d) 3. (a) 4. (b)

Case Study 5

Read the extract given below and answer the questions on the basis of the same:

Normal residents and citizens are two different things. Normal resident can be a resident or non-resident. But citizenship is basically a legal concept based on the place of birth of the person or some legal provisions allowing a person to become a citizen. On the basis of this information, answer the following questions. (Identify as normal resident or citizen)

Q 1. Mr. A was born in England but is living in India for more than one year. (Explain the concept)

Ans. Mr. A is a citizen of England but a normal resident of India. A normal resident is defined as a person or an institution who ordinarily resides in a country for a period of at least one year or more and whose centre of economic interest lies in that country.

Q 2. Foreign tourists visiting India for a couple of months to see Qutab Minar, Taj Mahal, etc.

Ans. They are neither citizens nor normal resident of India. Because the following persons or institutions are not treated as normal residents of a country where they are living or located:

(i) Foreign staff of embassies and consulates and members of foreign armed forces located in the country.

(ii) Foreign visitors or tourists visiting the country for higher studies, medical treatment, sports, etc. They are the residents of their respective countries.

(iii) International organisations such as World Bank, WHO, IMF, etc. They fall under international area.

(iv) The crew members of foreign ships and aircrafts.

Case Study 6

Read the extract given below and answer the questions on the basis of the same:

The Budget Estimate of total spending for 2021-22 is ₹ 34.83 lakh crore. The Revised Estimate for total central spending in 2020-21 is ₹ 34.5 lakh crore. The Gross Domestic Product (GDP) deflator-if one takes 14.4% nominal GDP growth projection for 2021-22 given in the budget and 11% real GDP forecast given in the latest Economic Survey comes to 3.4%. This means that central spending should have increased to at least ₹ 35.7 lakh crore to keep it unchanged in real terms. The fact that it has not happened implies that the 2021-22 budget entails a negative fiscal stimulus to the economy.

To be sure one could argue that 2020-21 was an abnormal year and, therefore, the government is justified in rolling back its welfare spending push, as the economy gets unlocked and vaccination gains momentum.

Q 1. State the significance of GDP Deflator.

Ans. The GDP deflator shows how much a change in GDP relies on changes in the price level. It expresses the extent of price level changes, or inflation, within the economy by tracking the prices paid by businesses, the government, and consumers.

Q 2. Calculate Real GDP, If GDP Deflator = 125 and Nominal GDP = ₹ 15,000 crore.

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

Given ⇒ GDP deflator ⇒ 125,
Nominal GDP ⇒ ₹ 15,000 crore

$125 = \frac{15,000}{\text{Real GDP}} \times 100$

$$\text{Real GDP} = \frac{15{,}000}{125} \times 100$$

$$\text{Real GDP} = 120 \times 100$$

$$\underline{\text{Real GDP} = ₹\ 12{,}000 \text{ crore}}$$

Very Short Answer Type Questions

Q 1. Define macroeconomics.

Ans. It is the study of aggregates relating to the whole economy, such as income and employment, aggregate demand, aggregate supply, government budget, etc.

Q 2. Name the branch of economics which is primarily concerned with the study of broad aggregates.

OR

Which branch of economics deals with the aggregates of the economy?

Ans. Macroeconomics.

Q 3. Name the book written by Lord J.M. Keynes on macroeconomics.

Ans. 'General Theory of Employment, Interest and Money.'

Q 4. How many sectors are there in the economy?

Ans. There are four major sectors in the economy:
(i) Household sector (ii) Producer sector
(iii) Government sector (iv) External sector

Q 5. State the basic economic activities in an economy.

Ans. The basic economic activities in an economy are as follows:
(i) Production (ii) Consumption
(iii) Investment

Q 6. What is circular flow of income?

Ans. The flow of money income across different sectors of the economy is called circular flow of income.

Q 7. What is stock variable?

Ans. Stock variable refers to that variable which is measured at a particular point of time. For example, national wealth.

Q 8. What is flow variable?

Ans. Flow variable refers to that variable which is measured over a specific period of time. For example, national income.

Q 9. State three phases of circular flow of income.

Ans. Production, distribution and disposition are the three phases of circular flow of income.

Q 10. What is real flow?

Ans. It is the flow of goods and services between firms and households.

Q 11. What is money flow?

Ans. It is the flow of money income between firms and households.

Q 12. What do you mean by leakages?

Ans. It refers to the withdrawal of money from circular flow of income.

Q 13. What do you mean by injection?

Ans. It refers to the addition of money to circular flow of income.

Q 14. In a two sector economy, which sectors are excluded?

Ans. In a two sector economy, there is no government sector and external sector.

Q 15. Can there be savings in a two-sector economy?

Ans. Yes, there can be savings in a two-sector economy in the presence of financial market.

Q 16. Give two examples of flow concept. *(CBSE 2019)*

Ans. (i) Profits (ii) National Income

Q 17. What is domestic territory?

Ans. Domestic territory means political frontiers including territorial waters of the country along with ships and aircrafts operated by normal residents between two or more countries along with fishing vessels in the international waters and embassies, consulates, military establishments, etc. located abroad.

Q 18. What is factor income?

Ans. It refers to income received by factors of production for rendering factor services in the production process. For example, salary.

Q 19. Give two examples of factor income.

Ans. Salary and rent.

Q 20. What are primary inputs or factors of production?

Ans. Primary inputs are those inputs which are required to produce goods and services. These are land, labour, capital and entrepreneurship.

TiP

We can easily remember Factors of Production as CELL
C = Capital, E = Entrepreneurship, L = Land, L = Labour.

Q 21. Is factor income included in national income?

Ans. Yes, factor income is included in national income because it is a bi-lateral concept.

Q 22. What is the other name of factor income?

Ans. Factor income is also known as earned income.

Q 23. What is transfer income?

Ans. The reward received without rendering factor services in the production process is known as transfer income.

Q 24. Give two examples of transfer income.

Ans. Scholarship, pocket money.

Q 25. Is transfer income included in national income?

Ans. No, transfer income is not included in national income because it is a unilateral concept.

Q 26. What is the other name of transfer income?

Ans. Transfer income is also known as unearned income.

Q 27. What are final goods?

Ans. Final goods are those goods which are either used for consumption purpose or for investment purpose.

Q 28. What are intermediate goods?

Ans. Intermediate goods are those goods which are either used for further production or for re-sale during the same accounting year.

Q 29. What are consumer goods or consumption goods?

Ans. Consumer/Consumption goods are those goods which directly satisfy human wants.

Q 30. Give examples of consumer goods.

Ans. Biscuit, bread, mobile phone, LED TV, shirt, shoes, etc.

Q 31. State the classification of consumer goods.

Ans. Consumer goods can be classified as:

(i) Durable consumer goods
(ii) Semi-durable consumer goods
(iii) Non-durable consumer goods
(iv) Services

Q 32. What is investment or capital formation?

Ans. The excess of production over consumption which is used for further production is known as investment. It is an addition to the capital stock of an economy.

Q 33. Exports are not a part of 'Net Factor Income from abroad'. Elaborate the reason behind the given statement. *(CBSE 2022, Term-2)*

Ans. Exported goods and services are produced in domestic territory of a country, therefore, export of goods and services is a part of Gross Domestic Product (GDP). Export receipts are not 'net factor income from abroad' as they are revenue of the firms from sale of their products.

Q 34. Define current transfers.

Ans. Current transfers are defined as the transfers made out of the current income of the payer and added to the current income of the recipient.

Q 35. Give two examples of intermediate goods.

Ans. (i) Paper used by publisher.
(ii) Vegetables purchased by a restaurant.

Q 36. What is real GDP?

Ans. When GDP is estimated at base year prices or previous year prices, it is termed as real GDP.

Q 37. What is nominal GDP?

Ans. When GDP is estimated at current year prices, it is termed as nominal GDP.

Q 38. What is compensation of employees or emoluments of employees?

Ans. Compensation of employees is the sum total of wages and salaries in cash, wages and salaries in kind and employer's contribution to social security schemes like LIC, Provident Fund, etc.

In short, COE = Wages and Salaries in Cash
+ Wages and Salaries in Kind
+ Employer's Contribution to Social Security Schemes

Knowledge BOOSTER

COE does not include Employee's Contribution to Social Security Schemes.

Q 39. Define externalities.

Ans. Externalities is defined as the good or bad impact of an economic activity for which it is not paid (or penalised).

Q 40. What is GDP deflator?

Ans. GDP deflator is the ratio between nominal GDP and real GDP multiplied by 100.

$$\text{In brief, GDP Deflator} = \frac{\text{Nominal GDP}}{\text{Real GDP}} \times 100$$

Short Answer Type-I Questions

Q 1. Government spends on child immunisation programme. Analyse its impact on GDP and welfare of the people.

Ans. (i) GDP will increase due to employment of doctors and nurses and expenditure on health.
(ii) Due to this, health of children will improve and thus welfare will also increase.

Q 2. Suppose a ban is imposed on consumption of liquor in the country. Examine its effects on GDP and welfare. *(CBSE 2017)*

Ans. (i) GDP will decrease due to decrease in consumption as well as production of liquor (unemployment will increase).
(ii) Ban on consumption of liquor will increase the welfare of the people in the country as it will have a positive impact on health of the people.

Q 3. Estimate the value of Nominal Gross Domestic Product for a hypothetical economy, the value of Real Gross Domestic Product and Price Index are given as ₹ 500 crore and 125 respectively. *(CBSE SQP 2022, Term-2)*

Ans. Nominal GDP = Real GDP × Price Index/100
= 500 × 125/100
= ₹ 625 Crore

Q 4. GDP as an index of welfare may understate or overstate welfare. Explain using examples of positive and negative externalities.

Ans. GDP may understate or overstate welfare because it does not consider externalities.

(i) Overstate Welfare: As it excludes water pollution, air pollution, etc.

(ii) Understate Welfare: As it excludes public park, fly-over, etc.

Q 5. Government incurs expenditure to popularise yoga among the masses. Analyse its impact on GDP and welfare of the people. *(CBSE 2016)*

Ans. (i) GDP will increase as it will create more employment opportunities for Yoga teachers.
(ii) Welfare will increase as Yoga would lead to good health of the people.

Q 6. State the meaning of retained earning. *(CBSE 2022, Term-2)*

Ans. Retained earning is the amount of profit a company has left over after paying all its direct costs, indirect costs, income taxes and its dividends to shareholders.

Q 7. Suppose a ban is imposed on consumption of tobacco. Examine its likely effects on GDP and welfare. *(CBSE 2017)*

Ans. (i) GDP will decrease due to decrease in consumption and production of tobacco.

(ii) Ban on consumption of tobacco will increase the welfare of the people as it will reduce the chances of cancer and it will have a positive impact on health of the people.

Q 8. Classify the following as final goods or intermediate goods:

(i) Machine purchased by a dealer of machines.

(ii) Car purchased by a household.

(iii) Air conditioner in a house. *(CBSE 2018)*

Ans. (i) Machine is an intermediate goods because the purpose of this is resale during the same year.

(ii) Car is a final good because it is household durable goods, it provides satisfaction of wants.

(iii) Air conditioner is a final goods or consumer durable goods, it provides satisfaction of wants.

Q 9. When does Net Factor Income from Abroad (NFIA) shows Negative Value?

Ans. NFIA shows Negative Value when income earned by foreigners from our country is more than the income earned by us from abroad.

Q 10. Discuss the scope of macroeconomics.

Ans. The scope of macroeconomics is discussed as follows:

(i) Theory of Employment: Macroeconomics is concerned with determination of level of employment in the economy.

(ii) Theory of Money: Macroeconomics explains functions of money, components of money supply. Banking also plays an important role in understanding various aspects of macroeconomics problem like inflation, deflation, etc.

(iii) Theory of General Price Level: Problems regarding inflation, excess demand, deflation, etc. are studied with the help of macroeconomics variable.

(iv) Theory of Economic Growth: Macroeconomics studies fuller utilisation of resource and their growth to achieve the objective of economic growth ultimately.

(v) Theory of National Income: Macroeconomics studies generation of national income by product method, income method and expenditure method.

Q 11. Distinguish between Microeconomics and Macroeconomics.

Ans. Difference between Microeconomics and Macroeconomics are as follows:

S. No.	Basis of Difference	Microeconomics	Macroeconomics
(i)	Nature	It is that branch of economics which deals with individuals.	It is that branch of economics which deals with aggregates.
(ii)	Other name	It is also known as price theory.	It is also known as income theory.
(iii)	Main tools	Its main tools are demand and supply.	Its main tools are aggregate demand and aggregate supply.
(iv)	Derivation	It has been derived from the Greek word 'Mikros' which means small.	It has been derived from the Greek word 'Makros' which means large.

Q 12. Distinguish between Real flow and Money flow.

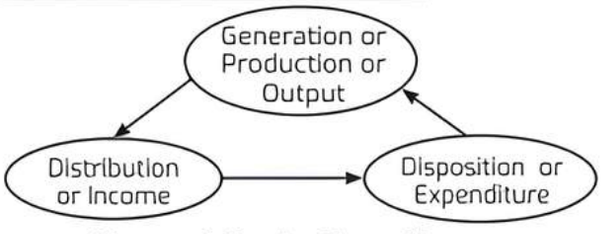
Ans. Difference between Real Flow and Money Flow are as follows:

S. No.	Basis of Difference	Real Flow	Money Flow
(i)	Meaning	It is the flow of goods and services between firms and households.	It is the flow of money income between firms and households.
(ii)	Other name	It is also known as physical flow.	It is also known as monetary or income or nominal flow.
(iii)	Concept	It is the concept of traditional economy.	It is the concept of modern economy.
(iv)	Exchange	It involves exchange of goods and services.	It involves exchange of money.

Q 13. Explain the circular flow of income. *(CBSE 2017)*

Ans. The flow of money income across different sectors of the economy is called circular flow of income.

It is the cycle of generation of income in the production process, its distribution among the factors of production and finally, its circulation from households to firms in the form of consumption expenditure on goods and services produced by them.



Phases of Circular Flow of Income

It is a circular flow because it neither has a beginning nor an end. The flow of income continues because production is a continuous process.

Q 14. What is meant by factor income to abroad? State its components.

Ans. It refers to the 'Factor Income Paid To' non-residents or normal residents of other countries for their factor services within the economic territory.

Components of Factor Income to Abroad:

(i) Compensation of employees paid to the non-residents for their factor services within the economic territory.

(ii) Income from property (rent, interest, royalty) and entrepreneurship (dividend) paid to the rest of the world.

(iii) Retained earnings of enterprises owned by non-residents within the domestic territory.

Q 15. Distinguish between Stock and Flow Variables.
(CBSE 2017)

Ans. Difference between Stock and Flow Variables are as follows:

S.No.	Basis of Difference	Stock Variable	Flow Variable
(i)	Meaning	Stock variable refers to that variable which is measured at a particular point of time.	Flow variable refers to that variable which is measured over a specific period of time.
(ii)	Time dimension	Stock does not have a time dimension.	Flow has a time dimension.
(iii)	Concept	Stock is a static concept.	Flow is a dynamic concept.
(iv)	Example	Water in a tank.	Water entering into the tank.

Q 16. Distinguish between final goods and intermediate goods. Give examples. *(CBSE SQP 2022, Term-2, 2019)*

OR

Why there is a need to make distinction between final and intermediate goods? *(CBSE 2022, Term-2)*

OR

With suitable examples, distinguish between final goods and intermediate goods. *(CBSE 2023)*

Ans. Difference between Final Goods and Intermediate Goods are as follows:

S. No.	Basis of Difference	Final Goods	Intermediate Goods
(i)	Use	They are ready for use by the final consumers *i.e.*, no value has to be added to the final goods.	They are used for further production *i.e.*, some value is yet to be added to the intermediate goods.
(ii)	Demand	They have a direct demand because they directly satisfy the wants of the consumers.	They have a derived or indirect demand because their demand depends upon the demand for final goods.
(iii)	Lie	They lie outside the production boundary line.	They lie inside the production boundary line.
(iv)	Included	Final goods are included in National Income and Domestic Income.	Intermediate goods are not included in National Income and Domestic Income.
(v)	Example	Car purchased by a household.	Car purchased by Ola.

Q 17. Distinguish between Consumer goods and Capital goods. *(CBSE 2018)*

Ans. Difference between Consumer Goods and Capital Goods are as follows:

S.No.	Basis of Difference	Consumer Goods	Capital Goods
(i)	Satisfy	These are those goods which directly satisfy human wants.	These are those goods which indirectly satisfy human wants.
(ii)	Promote	These goods do not promote the production capacity of the economy.	These goods promote the production capacity of the economy.
(iii)	Examples	Bread, Butter, Shirts, Pen, Television, Furniture, etc.	Machinery, Equipments, Plant, Building, etc.

Q 18. Who is a normal resident of a country?

OR

State the meaning of normal resident of a country.
(CBSE 2023)

Ans. **Normal Resident of a Country:** A normal resident is a person or an institution who ordinarily resides in a country for a period of at least one year more and whose centre of economic interest lies in that country.

Knowledge BOOSTER

Centre of Economic Interest: *It means that the resident lives within the domestic territory and he carries out the economic activities like spending, earning, etc., from that location.*

Q 19. "Many goods and services which may contribute to welfare, but are not included in estimating Gross Domestic Product (GDP)." Do you agree with the given statement? Give valid reason in support of your answer. *(CBSE 2023)*

Ans. Yes, GDP tells us about the total money value of goods and services produced in the country during a period of one year. GDP does not tells us anything about the non-marketing activities (transactions) which promote social welfare. For example, services of housewife, kitchen gardening, etc.

Q 20. "Machine purchased by a firm is always a capital good." Do you agree with the given statement? Give valid reasons for your answer. *(CBSE SQP 2023-24)*

Ans. No, it is not necessary that machine purchased is a capital good. It will depend upon its use.

A machine purchased by a firm will be a capital good when it is used for the production of other goods and services. However, if it is purchased by a firm for resale purposes in the same year, it will be considered as an intermediate good and not a capital good.

Q 21. State the meanings of the following:

(i) Externalities **(ii) Operating Surplus**

(iii) Consumption Goods *(CBSE SQP 2023-24)*

Ans. **(i) Externalities:** It refers to benefits or harms of an activity caused by a firm or an individual for which they are not paid or penalised. For example, environmental pollution caused by industrial plants. It can be of two types:

- **Positive Externality:** It is a benefit that accrues to an individual or society for which he has to pay nothing.
- **Negative Externality:** It is a harm that accrues to an individual or society for which they cannot claim compensation.

(ii) Operating Surplus: The operating surplus includes income from property and income from entrepreneurship. It is earn in both private and government enterprise.

Operating Surplus = Rent + Interest + Royalty + Profit

(iii) Consumption Goods: Consumption goods are those goods which directly satisfy human wants. For example, bread, butter, etc. Consumption goods are sub-divided into following categories:

- Durable consumer goods
- Semi-durable goods
- Non-durable goods
- Services.

Q 22. Define Gross Domestic Product (GDP) deflator and discuss its importance. *(CBSE SQP 2022-23)*

Ans. **Gross Domestic Product (GDP) Deflator:**

GDP deflator measures the average level of prices of all the goods and services that make up GDP.
It is used to eliminate the effect of price changes and to determine the real change in physical output.

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

Importance of GDP Deflator

The importance of GDP deflator are:

(i) GDP deflator is a tool which is used to eliminate the effect of price fluctuations in the economy.

(ii) It helps in comparison of growth rate of the economy.

Q 23. State and discuss any two precautions to be considered while estimating national income by expenditure method. *(CBSE SQP 2022-23)*

Ans. Precautions to be taken while estimating national income by expenditure method are as follows:

(i) Expenditure on intermediate goods will not be included in national income as it is already included in the value of final expenditure. If we include their value again, then it will lead to double counting of expenditures.

(ii) Transfer payments are not included in national income because such payments are not directly connected with any productive activity and they are not related to value addition.

Q 24. It is possible that an income, which is a part of domestic income of India, is not included in the national income. Similarly, an income, which is a part of national income, may not be included in the domestic income. Give examples.

Ans. **(i) Included in National Income, but not in Domestic Income:** Profits of a Branch of State Bank of India (SBI) in London: It will be included in the national income as it is a part of the factor income from abroad. However, it will not be included in India's domestic income as the SBI branch in London is not a part of the domestic territory of India.

(ii) Included in Domestic Income, but not in National Income: Profit earned by a Branch of a Foreign Bank in India: It will be included in the domestic income as these profits are earned within the domestic territory of India. However, it will not be included in the national income as it is a part of the factor income paid abroad (Foreign Bank is not a resident of India).

Q 25. What is double counting? Explain with the help of an example. How can we avoid the problem of double counting? *(CBSE 2019)*

Ans. The process of counting the value of a commodity more than once is called double counting. While estimating National Income, the value of final goods must be counted only once as the original goods passes through many stages therefore, there is always danger that its value may be included at every stage and it may lead to double counting.

For example: A farmer produces one tonne of wheat and sell it for ₹ 400 in the market to a flour mill.

The purchase of wheat by the flour mill is an intermediate goods. The mill converts wheat into flour and sells it for ₹ 600 to a baker.

The baker sell bread to shopkeeper for ₹ 800.

The shopkeeper sell the entire-stock of bread to the final consumer for ₹ 900. Thus, value of output = ₹ 400 + 600 + 800 + 900 = ₹2,700

Now, the value of wheat is counted four times, the value of services of the miller thrice, and the value of services by the baker twice. In other words, the value of wheat and value of service of the miller and baker have been counted more than once.

Methods to Avoid Double Counting

To avoid double counting, two methods are used:

(i) Final Output Method: According to this method, the value of only final goods should be added to determine the national income.

(ii) Value Added Method: According to this method, sum total of the value added by each producing unit should be taken in the national income.

Short Answer Type-II Questions

Q 1. Explain the components of Net Factor Income from abroad (NFIA).

Ans. There are three main components of NFIA which are as follows:

(i) **Net Compensation of Employees:** It refers to the difference between income from work received by resident workers from abroad and similar payments made to the non-residents.

(ii) **Net Income from Property and Entrepreneurship:** It refers to the difference between income from property and entrepreneurship (in the form of rent, interest and profit) received by the residents of the country and similar payments made to the rest of the world.

(iii) **Net Retained Earnings:** It refers to the difference between retained earnings of the resident companies located abroad and retained earnings of non-resident companies located within the domestic territory of the country.

Q 2. Explain externalities as a limitation of GDP.

OR

How can externalities be a limitation of using GDP as an index of welfare?

Ans. Externalities refers to benefits or harms of an activity caused by a firm or an individual for which they are not paid or penalised.

For example, environmental pollution caused by industrial plants. As such external effects do not form part of market transactions, GDP does not consider such negative externalities. So, when GDP of a country increases in such a manner that there is a degradation of environment, then such an increase in GDP will not promote welfare in the country. So, GDP is not a satisfactory measure of economic welfare.

Q 3. Distinguish between positive externalities and negative externalities. *(CBSE SQP 2022, Term-2)*

Ans. Positive externalities refers to benefits caused by one entity to another, without being paid for it. Whereas negative externalities refers to the harms caused by one entity to another without being penalised for it.

Q 4. Discuss briefly the concept of 'Externalities', with suitable example. *(CBSE 2022, Term-2)*

Ans. Externalities refers to benefits or harms of an activity caused by a firm or an individual for which they are not paid or penalised.

For example: environmental pollution caused by industrial plants.

Q 5. Explain the composition of GDP as a limitation of not a satisfactory measure of economic welfare.

Ans. GDP tells us about the total money value of goods and services produced in the country during a period of one year.

GDP does not disclose the type and structure of goods and services produced in the economy. So, when GDP of a country increases mainly due to the production of war equipments and ammunition instead of production of machinery and capital equipments, then such an increase in GDP will not promote welfare in the country. So, GDP is not a satisfactory measure of economic welfare.

Q 6. Explain inflation as a limitation of GDP not to be a satisfactory measure of economic welfare.

Ans. GDP of a country can increase due to an increase in physical output, increase in general price level or both. However, when GDP of a country increases due to an increase in physical output, then it shows economic growth.

But, if the GDP of the country increases mainly due to a rise in general price level, *i.e.* due to inflation, and not due to increase in physical output, then such an increase in GDP will not promote welfare in the country. So, GDP is not a satisfactory measure of economic welfare.

Q 7. How does non-monetary exchanges are taken as limitation of GDP as not a satisfactory measure of welfare? *(CBSE 2018)*

Ans. GDP tells us about the total money value of goods and services produced in the country during a period of one year.

GDP does not tell us anything about the non-monetary transactions which promote social welfare.

For example, services of housewife, kitchen gardening, leisure time activities, etc.

GDP does not consider them because they are not measured in terms of money. So, they are not recorded in the books of account due to non-availability of data. GDP ignores such welfare promoting activities. So, GDP is not a satisfactory measure of economic welfare.

Q 8. Explain how 'Non-Monetary Exchanges' impact the use of Gross Domestic Product as an index of economic welfare?

Ans. Non-monetary exchange transactions are not included in the estimation of Gross Domestic Product on account of practical difficulties like non-availability of reliable data. Although, these activities promote public welfare which may lead to under-estimation of GDP. For example, kitchen gardening, services of housewife, etc.

COMMON ERROR

Generally, students do not give the examples of non-monetary exchanges.

TiP

Students should give the examples of non-monetary exchanges.

Q 9. How does distribution of GDP is a limitation of GDP as not a satisfactory measure of welfare?

Ans. GDP tells about the total money value of goods and services produced in the country during a period of one year. GDP does not tell about the distribution of income in the economy.

So, when GDP of a country increases and distributed in such a manner that rich becomes more rich and poor becomes poorer then such an increase in GDP will not promote welfare in the country. So, GDP is not a satisfactory measure of economic welfare.

Q 10. "All capital goods are producer goods but all producer goods are not capital goods." Explain.

Ans. Capital goods include fixed assets like plant, machinery, building, etc. On the other hand, producer goods not only include plant, machinery, building etc. but also include raw-materials *i.e.*, single use producer goods. So, the scope of producer goods is greater than the scope of capital goods. Thus, it is correct to say that "All capital goods are producer goods but all producer goods are not capital goods."

Q 11. Distinguish between real GDP and nominal GDP. Out of these, which is better and why?

OR

Using a suitable numerical example, distinguish between real Gross Domestic Product (GDP) and nominal Gross Domestic Product (GDP). *(CBSE 2023)*

Ans. Difference between Real GDP and Nominal GDP are as follows:

S.No.	Basis of Difference	Real GDP	Nominal GDP
(i)	Estimate	When GDP of a country is estimated at base year prices, it is known as Real GDP.	When GDP of a country is estimated at current year prices, it is known as Nominal GDP.
(ii)	Other name	It is also known as GDP at constant price.	It is also known as GDP at current price.
(iii)	Inflation	It is not affected by inflation.	It is affected by inflation.
(iv)	Index	It is a satisfactory index of economic growth.	It is not a satisfactory index of economic growth.

Real GDP is a Better Measure: Real GDP is a better measure to compare the changes in the physical output of goods and services over different years because nominal GDP can increase due to inflation also.

Therefore, Real GDP is better than Nominal GDP as it truly reflects the growth of the economy.

Example: If Real GDP is ₹ 500 and Price Index (base = 100) is 125. Calculate Nominal GDP.

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

$$125 = \frac{\text{Nominal GDP}}{500} \times 100$$

$$\frac{125 \times 500}{100} = \text{Nominal GDP}$$

$\Rightarrow$ Nominal GDP = ₹ 625

Q 12. Giving valid reasons, explain which of the following will not be included in estimation of National Income of India?

(i) Purchase of shares of X. Ltd. by an investor in the National Stock Exchange.

(ii) Salaries paid by the French Embassy, New Delhi to the local workers of the housekeeping department.

(iii) Compensation paid by the Government of India to the victims of floods. *(CBSE SQP 2022, Term-2)*

Ans. (i) and (ii) transactions are mere paper claims and do not lead to any value addition.

(iii) Compensation paid by the Government of India is mere transfer payment and does not lead to any flow of goods and services in an economy.

Q 13. Will the following be a part of domestic factor income of India? Give reasons for your answer.

(i) Old age pension given by the government.

(ii) Factor income from abroad.

(iii) Salaries to Indian residents working in Russian Embassy in India.

(iv) Profits earned by a company in India, which is owned by a non-resident.

Ans. (i) Old age pension is not a part of domestic income, because it is transfer payment.

(ii) It is not a part of domestic factor income because FIFA is earned outside the Domestic Territory of India.

(iii) It is not a part of domestic factor income, because it is earned outside the Domestic Territory of India.

(iv) It is a part of domestic factor income, because company is located inside the Domestic Territory of India.

Q 14. Will the following factor income be included in domestic factor income of India? Give reasons for your answer.

(i) Compensation of employees to the residents of Japan working in Indian Embassy in Japan.

(ii) Profits earned by a branch of Foreign Bank in India.

(iii) Rent received by an Indian resident from Russian Embassy in India.

(iv) Profits earned by a branch of State Bank of India in England.

Ans. (i) It will be included, because earned inside the Domestic Territory of India.

(ii) It will be included, because earned inside the Domestic Territory of India.

(iii) It will not be included, because earned outside the Domestic Territory of India.

(iv) It will not be included, because earned outside the Domestic Territory of India.

Q 15. Giving reasons, explain how the following are treated while estimating domestic factor income of India.

(i) Remittances from non-resident Indians to their families in India.

(ii) Rent paid by the embassy of Japan in India to a resident Indian.

(iii) Profits earned by branches of Foreign Banks in India.

(iv) Salary paid to a non-resident working in school located in Delhi.

Ans. (i) It will not be included while estimating domestic factor income of India, because it is transfer receipts.

(ii) It will not be included while estimating domestic factor income of India, because it is earned outside the Domestic Territory of India.

(iii) It will not be included while estimating domestic factor income of India, because it is earned inside the Domestic Territory of India.

(iv) It will not be included while estimating domestic factor income of India, because it is earned inside the Domestic Territory of India.

Q 16. Giving reason, explain how should the following be treated in estimating national income?

(i) Expenditure on fertilizers by a farmer.

(ii) Purchase of tractor by a farmer.

(iii) Furniture purchased by a school.

(iv) Chalks, dusters, etc. purchased by a school.

Ans. (i) It will not be included while estimating national income, because it is Intermediate consumption.

(ii) It will not be included while estimating national Income, because it is Investment expenditure.

(iii) It will not be included while estimating national Income, because it is Investment expenditure.

(iv) It will not be included while estimating national Income, because it is Intermediate consumption.

Q 17. Giving valid reasons, explain how following would be treated while estimating National Income?

(i) Payment of indirect taxes by a firm.

(ii) Purchase of goods by foreign tourists.

(CBSE 2022, Term-2)

Ans. (i) Payment of indirect taxes by a firm is a transfer payment made by the firm to the government. It will not be taken into national income.

(ii) Purchase of goods by foreign tourists will be included in national income. It is the part of capital formation in the country and contributes to the growth domestic product.

Q 18. How should the following be treated in estimating National Income of a country? Give valid reasons.

(i) Profits earned by Foreign Banks in India.

(ii) Expenditure on upgradation of fixed assets by a firm. *(CBSE 2023)*

Ans. (i) Profits earned by Foreign Banks in India will not be included in India's national income.

(ii) It is included in the national income of a country as it is a part of the private final consumption expenditure.

Q 19. "While estimating Gross Domestic Product (GDP) by expenditure method, entire focus is on expenditures incurred by the residents of the country."
Do you agree with the given statement? Give valid reason in support of your answer. *(CBSE 2023)*

Ans. No, given statement is not true. In the estimation of GDP, we include all expenditures on domestically produced goods both by the residents as well as non-residents of a country.

Q 20. Giving valid reasons, explain how the following would be treated while estimating domestic income?

(i) Payment made by American tourist for goods purchased in India.

(ii) Tomatoes grown by Ms. Puja in her kitchen garden. *(CBSE SQP 2023-24)*

Ans. (i) It will be included in domestic income as goods purchased by American tourist is the expenditure made by him in India and will be included as exports.

(ii) It will not be included in domestic income because it is difficult to ascertain their market value. Moreover, such transactions are not undertaken for any monetary consideration.

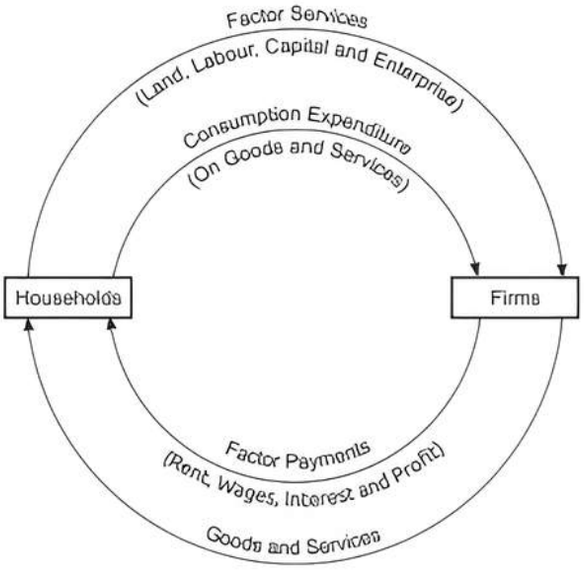
Long Answer Type Questions

Q 1. Explain circular flow of income in a two sector economy.

OR

Explain circular flow of income in a simple economy.

Ans. In a two sector economy, we have household sector and producer sector. In these sectors, there is an unending flow of goods and services between households and firms, referred to as 'circular flow of income'. Consider the diagram given below:



In the given diagram, the outer loop shows the real flow, *i.e.*, flow of factor services from households to the firms and corresponding flow of goods and services from firms to the households.

The inner loop shows the monetary flow, *i.e.* flow of factor payments from firms to households and the corresponding flow of consumption expenditure from households to firms.

In a two sector economy, following conclusions are drawn:

(i) Total production of goods and services by firms = Total consumption of goods and services by households.

(ii) Factor payments by firms = Factor income of households.

(iii) Consumption expenditure by households = Factor income of households.

It is based on the following assumptions:

(i) Firms produce goods and services and sell their entire output to the households.

(ii) Household receive factor income for their services and spent the entire amount on consumption of goods and services.

Q 2. Write down the steps of calculating national income by value added method.

Ans. Steps to Calculate National Income by Value Added Method: According to value added or production method, for estimating the value of national income, the following three steps are involved:

Step 1: Identification and Classification of Producing Enterprises: This is the first step in value added method. All producing enterprises can be classified under three heads:

(i) **Primary Sector:** It is that sector which produces goods by exploiting natural resources like land, water, forest, etc. It includes agriculture and allied activities, fishing, etc.

(ii) **Secondary Sector:** It is also called manufacturing sector. Entrepreneur in this sector transform one type of commodity into another type of commodity.

(iii) **Tertiary Sector:** It is also known as service sector. Enterprises in this sector produce service only.

Step 2: Estimation of NDP_{FC} or Domestic Income: Value added is the market value of only final goods and service. Value of output is the excess of value added over the value of intermediate consumption.

Gross Value Added = Value of Output
– Intermediate Consumption

If intermediate consumption is not subtracted from the value of output, it would lead to the problem of double counting.

GDP_{MP} = Gross Value Added in Primary Sector
+ Gross Value Added in Secondary Sector
+ Gross Value Added in Tertiary Sector

$NDP_{FC} = GDP_{MP}$ – Depreciation – NIT

Step 3: Estimation of National Income/NNP_{FC}: In this step, NFIA is computed and is added to NDP_{FC} to obtain NNP_{FC}.

In brief, $NNP_{FC} = NDP_{FC} + NFIA$

Q 3. Write down the steps of calculating national income by income method.

Ans. Steps to Calculate National Income by Income Method: According to income method, for estimating the value of national income, the following steps are involved:

Step 1: Estimation of NDP_{FC} or Domestic Income: For estimating domestic income, following components are involved:

(i) Compensation of Employees: All payments made by producer to its employees as wages and salaries whether in cash or in kind employees.

Compensation of Employees = Wages and Salaries
+ Social Security Contribution by Employers

(ii) Operating Surplus: The operating surplus includes income from property and income from entrepreneurship. It is earn in both private and government enterprise.

Operating Surplus = Rent + Interest + Royalty
+ Profit

(iii) Mixed Income: It refers to the income of self-employed persons using their labour, land, capital and entrepreneurship to produce goods and services. These income are mixed in terms of rent, interest and profit.

NDP_{FC} = Compensation of Employees
+ Operating Surplus + Mixed Income of Self-employed

Step 2: Estimation of National Income/NNP_{FC}: In this step, NFIA is computed and it is added to NDP_{FC} to obtain NNP_{FC}.

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

Q 4. Write down the steps of calculating National Income by expenditure method.

Ans. Steps to Calculate National Income by Expenditure Method

Step 1: Identification of Economic Units:

In this step, we classify the economic units incurring final expenditure are as follows:

(i) Household Sector (ii) Producing Sector

(iii) Government Sector (iv) External Sector

Step 2: Classification of Final Expenditure: In this step, we classify the final expenditure as follows:

(i) Final Consumption Expenditure: It includes private final consumption expenditure and consumption expenditure of general government.

(a) Private Final Consumption Expenditure (PFCE): It refers to the expenditure on the purchase of goods and services by households and private non-profit institutions serving households. It is divided into three major sub-categories:

- Expenditure on non-durable goods.
- Expenditure on durable goods.
- Expenditure on services.

(b) Government Final Consumption Expenditure (GFCE): It refers to the expenditure incurred by general government on various administrative services. It is the sum of the following items:

- Purchases from abroad.
- Goods and services purchased by the government from domestic market.
- Compensation of employees paid by the government.

(ii) Gross Domestic Capital Formation: It includes expenditure on the purchases of final goods by the producers. The investment expenditure is of two kinds:

(a) Gross Domestic Fixed Investment: It refers to expenditure on purchasing fixed assets like machinery by producers.

(b) Change in Stock/Inventory Investment: The expenditure on change in stock is measured by multiplying the volume of physical change in stock with the market price of the stock. It is estimated as:

Change in Stock = Closing Stock – Opening Stock.

(iii) Net Exports: It refers to the difference between exports and imports of a country during a period of one year.

Net Exports = Exports – Imports

Step 3: Estimation of NDP_{FC}: In this step, we first obtain GDP_{MP} as follows:

GDP_{MP} = PFCE + GFCE + GDCF + Net Exports

Then, we subtract depreciation and NIT from it in order to get the domestic income

$NDP_{FC} = GDP_{MP}$ – Depreciation – NIT

Step 4: Estimation of National Income: In this step, we first calculate NFIA and then we add it to NDP_{FC} to obtain NNP_{FC}.

In brief, $NNP_{FC} = NDP_{FC}$ + NFIA.

Q 5. What are the precautions to be taken while estimating national income by value added method?

Ans. Precautions to be taken while estimating National Income by value added method are as follows:

(i) Intermediate goods are not included in national income because their value is already included in the value of final goods. If we include them again, then it would lead to double counting.

(ii) Sale and purchase of second-hand goods will not be included in national income because their value has already been included in the national income of some previous year in which they were originally produced. Such goods do not affect the current flow of goods and services.

(iii) Imputed value of owner occupied building will be included in national income because they enjoy housing services similar to those people who stay in rented houses.

(iv) Production of goods for self-consumption will be included in national income because they contribute to the current output. However, their value is to be estimated or imputed as they are not sold in the market.

(v) Production of services for self-consumption (domestic services) will not be included in national income because it is difficult to measure their market value. These services are produced and consumed at home and they never enter the market place.

(vi) Change in stock of goods or inventories or net increase in the stock of inventories will be included in national income as it is a part of capital formation.

Q 6. What are the precautions to be taken while estimating national income by income method?

Ans. Precautions to be taken while estimating NI by income method are as follows:

(i) Transfer incomes are not included in national income because such incomes are not directly connected with any productive activity and they are not related to value addition.

(ii) Income from the sale of second-hand goods will not be included in national income because their value has already been included in the national income of some previous year in which they were originally produced. Such goods do not affect the current flow of goods and services.

(iii) Income received as commission and brokerage on second-hand goods will be included in national income because commission agent or a broker provide factor services.

(iv) Income from the sale of financial assets like shares and bonds will not be included in national income because such transactions do not contribute to current flow of goods and services. Also, they are just paper claims and involves a change of ownership title only.

(v) Imputed value of services provided by owners of production units will be included in national income because they are productive activities and add to the flow of goods and services.

(vi) Windfall gains like lottery will not be included in national income because there is no productive activity involved and it is just an income by chance.

(vii) Payments out of past savings like death duties, gift tax, etc. will not be included in national income because they do not add to the current flow of goods and services.

Q 7. What are the precautions to be taken while estimating national income by expenditure method?

Ans. Precautions to be taken while estimating national income by expenditure method are as follows:

(i) Expenditure on intermediate goods will not be included in national income as it is already included in the value of final expenditure. If we include their value again, then it will lead to double counting of expenditures.

(ii) Transfer payments are not included in national income because such payments are not directly connected with any productive activity and they are not related to value addition.

(iii) Expenditure on second-hand goods will not be included in national income because their value has already been included in the national income of some previous year in which they were originally produced. Such goods do not affect the current flow of goods and services.

(iv) Expenditure on commission and brokerage on second-hand goods will be included in national income because commission agent or a broker provide factor services.

(v) Expenditure on the purchase of financial assets like shares and bonds will not be included in national income because such transactions do not contribute to current flow of goods and services. Also, they are just paper claims and involves a change of ownership title only.

(vi) Expenditure on own account production such as production for self-consumption, imputed value of owner occupied building, free services from government and private non-profit institutions will be included in national income because they are productive services.

Q 8. Which of the following are included in national income? Give reasons:

(i) Expenditure on adding a floor to the building.

(ii) Expenditure on maintenance of building.

(iii) Family members working free on farm owned by family.

(iv) Wheat grown by farmer but used entirely for family's consumption.

(v) Services rendered by family members to each other.

(vi) Growing vegetables in a kitchen garden of the house.

Ans. (i) It will be included in national income because it is an investment (capital formation).

(ii) It will not be included in national income because it is treated as intermediate consumption and not an investment.

(iii) It will be included in national income as they are doing productive activity (their imputed salaries or wages).

(iv) It will be included in national income because production of goods for self-consumption is included in national income.

(v) It will not be included in national income because it is difficult to measure the value of such services. Also, these services are not done for earning money.

(vi) It will not be included in national income because it is considered as leisure time activity and is not connected with the earning of money (non-monetary transaction).

Q 9. Which of the following are included in national income? Give reasons:

(i) Interest paid by bank to depositors.

(ii) Interest paid by a firm.

(iii) Interest paid by an individual to bank.

(iv) Interest on debentures

(v) Old age pension

(vi) Retirement pension

Ans. (i) It is included in national income because banks do banking business for production activity.

(ii) It is included in national income because interest on loan taken for production activity.

(iii) No, it will not be included in national income because the loan is not taken for productive activity rather it is taken for consumption activity.

(iv) It is included in national income because company has taken loan for production purpose.

(v) It is not included in national income because it is made by government and is a transfer payment.

(vi) It is included in national income because it is a factor payment.

Q 10. Which of the following are included in national income? Give reasons:

(i) Government expenditure on street lighting.

(ii) Expenditure on providing free services by the government.

(iii) Expenditure by government in providing free education.

(iv) Expenditure by government in providing free medical services during pandemic COVID-19.

(v) Expenditure on the construction of fly-over by the government.

(vi) Payment of corporate tax to government by a firm.

Ans. (i) It will be included in national income because it is a part of government final consumption expenditure.

(ii) It will be included in national income because it is a part of government final consumption expenditure.

(iii) It will be included in national income because it is a part of government final consumption expenditure.

(iv) It will be included in national income because it is a part of government final consumption expenditure.

(v) It will be included in national income because it is an investment expenditure and it is a part of gross domestic capital formation.

(vi) It will not be included in national income because it is a transfer payment.

Q 11. Which of the following are included in national income? Give reasons:

(i) Sale of an old car or second-hand car.

(ii) Commission paid on sale of second-hand goods.

(iii) Rent paid by tenant to the landlord.

(iv) Imputed rent of self-occupied houses.

(v) Bonus paid to employee by employer.

(vi) Festival gift from an employer.

Ans. (i) No, it will not be included in national income because it is not a part of current year's production. Also, its value is already included in the year in which it was manufactured.

(ii) Yes, it will be included in national income because the commission agent renders productive services and is a factor income for him.

(iii) Yes, it will be included in national income because it is a factor payment.

(iv) Yes, it will be included in national income because all houses have rental value similar to those in rented houses.

(v) Yes, it will be included in national income because it is a part of compensation of employees.

(vi) No, it will not be included in national income because it is a transfer payment.

Numerical Type Questions

Q 1. If Nominal GDP is ₹1,200 and Price Index (with base 100) is 120. Calculate Real GDP. *(CBSE 2015)*

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

$\text{Therefore, } 120 = \frac{1.200}{\text{Real GDP}} \times 100$

$\text{Real GDP} = \frac{1.200 \times 100}{120} = 10 \times 100 = ₹1000$

Q 2. If Nominal GDP is ₹330 and Real GDP is ₹300. Calculate Price Index (with base 100). *(CBSE 2015)*

Sol. GDP Deflator or Price Index base = 100

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

$$\text{Therefore, Price Index} = \frac{330}{300} \times 100 = 110$$

Q 3. Calculate factor income to abroad if factor income from abroad is ₹100 and Net Factor Income from Abroad (NFIA) is ₹70.

Sol. We know that NFIA = FIFA – FITA

$70 = 100 - \text{FITA}$

$\text{FITA} = 100 - 70$

$\text{FITA} = ₹\ 30$

Here, FIFA = Factor income from abroad.

FITA = Factor income to abroad

Q 4. Calculate NFIA if:

(i) Factor income to abroad = (–) ₹ 60

(ii) Factor income to abroad = ₹ 60

Sol. (i) Net Factor Income from Abroad (NFIA)

= Factor Income from Abroad – Factor Income to Abroad

= 0 – (–)60

NFIA = ₹ 60

(ii) Net Factor Income from Abroad (NFIA)

= Factor Income from Abroad – Factor Income to Abroad

= 0 – 60

NFIA = (–) ₹ 60

Q 5. Calculate depreciation if total investment is ₹ 100 crore and actual investment is ₹ 80 crore.

Sol. We know that Total Investment means Gross Investment = ₹ 100 crore

and Actual Investment means Net Investment = ₹ 80 crore

∴ Depreciation = Gross Investment – Net Investment

= 100 – 80 = ₹ 20 crore

Q 6. The value of fixed asset is ₹ 5 lakh and its expected span of life is 10 years. Calculate depreciation.

Sol. Depreciation is obtained by dividing the value of fixed asset, by life span of fixed asset depreciation.

$$= \left[\frac{5.00.000}{10}\right] = ₹\ 50.000$$

Q 7. Calculate Depreciation if:
(i) GDCF = ₹ 300 (ii) NDCF = ₹200

Sol. Depreciation = GDCF – NDCF = 300 – 200 = ₹ 100.

Q 8. Calculate depreciation if:

	(₹)
(i) Net domestic capital formation	**400**
(ii) Change in stock (ΔS)	**50**
(iii) Gross domestic fixed capital formation	**450**

Sol. Depreciation = GDCF – NDCF
and GDCF = (GDFCF + ΔS) = (450 + 50) = 500
∴ Depreciation = 500 – 400 = ₹ 100

Q 9. Using the following information, calculate and analyse the value of Gross Domestic Product (GDP) deflator: *(CBSE 2022, Term-2)*

Year	2014-15	2016-17
Nominal GDP	6.5	9
Real GDP	6.5	7.2

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

For 2014-15 $= \frac{6.5}{6.5} \times 100 = 100$

For 2016-17 $= \frac{9}{7.2} \times 100 = 125$

TiP
GDCF – NDCF is used when depreciation is hidden.

Q 10. Suppose only one Good 'X' is produced in the country. Output of Good X during year 2018 and 2019 were 100 units and 110 units respectively. The market price of the product during the two years was ₹ 50 and ₹ 55 per unit respectively. Calculate the percentage change in Real Gross Domestic Product (GDP) in year 2019 using 2018 as the base year. *(CBSE 2023)*

Sol.

Year	Price (₹)	Output (units)	Real GDP (₹)
2018	50	100	50 × 100 = 5,000
2019	55	110	50 × 110 = 5,500

Now, % Change in Real GDP

$= \left(\frac{\text{Change in Real GDP}}{\text{Original Real GDP}} \times 100\right)$

$= \frac{5,500 - 5,000}{5,000} \times 100$

$= \frac{500}{5,000} \times 100 = 10\%$

Q 11. Suppose, in an imaginary economy, GDP at market price in a particular fiscal year was ₹ 4,000 crore, National Income was ₹2,500. Net factor income paid by the economy to rest of the world was ₹ 400 crore and the value of net indirect taxes is ₹ 450 crore. Estimate the value of consumption of fixed capital for the economy from the given data.

Sol. Given that

GDP_{MP} = ₹ 4,000 crore
NI (NNP_{FC}) = ₹ 2,500 crore
NFIA = ₹ – 400 crore
NIT = ₹ 450 crore
$NNP_{FC} = GDP_{MP}$ – Consumption of Fixed Capital – NIT + NFIA
2,500 = 4,000 – Consumption of fixed capital – 450 + (–400)
Consumption of Fixed Capital = 4,000 – 2,500 – 450 – 400
Consumption of Fixed Capital = ₹ 650 crore

Q 12. Suppose in a financial year, the Gross Domestic Product (GDP) at market price of a country was ₹1,100 crore. Net factor income from Abroad was ₹ 100 crore, the net indirect taxes was ₹ 150 crore and National income was ₹ 850 crore. Calculate the value of depreciation, on the basis of above information. *(CBSE 2023)*

Sol. Given that,
GDP_{MP} = ₹ 1,100 crore
NFIA = ₹ 100 crore
NIT = ₹ 150 crore
National income (NNP_{FC}) = ₹ 850 crore
$NNP_{FC} = GDP_{MP}$ – Consumption of fixed capital (depreciation) – NIT + NFIA
850 = 1,100 – depreciation – 150 + 100
Depreciation = 1,100 – 850 – 150 + 100
Depreciation = ₹ 200 crore

Q 13. Use the following information of an imaginary country:

Year	2016-17	2017-18	2018-19
Nominal GDP	6.5	8.4	9
GDP Deflator	100	140	125

(i) For which year is Real GDP and Nominal GDP same why?
(ii) Calculate Real GDP for the given years. Is there any year for which Real GDP falls?

Sol. (i) Clearly, in the year 2016-17, the GDP Deflator is 100. Therefore, for the year 2016-17, Real GDP and Nominal GDP are same, because when GDP Deflator is 100 it means prices are taken as base year prices.

(ii) $\text{Real GDP} = \frac{\text{Nominal GDP}}{\text{GDP Deflator}} \times 100$

Year 2016-17, Real GDP $= \frac{6.5}{100} \times 100 = 6.5$

Year 2017-18, Real GDP $= \frac{8.4}{140} \times 100 = \frac{840}{140} = 6$

Year 2018-19, Real GDP $= \frac{9}{125} \times 100 = \frac{900}{125} = 7.2$

Clearly, in the year 2017-18, Real GDP has declined to 6 it may be due to an increase in general price level in the economy (Inflation).

Directions (Q. Nos. 14-17): *Based on the use of consumption of fixed capital or depreciation or current replacement cost:*

Q 14. Calculate NDP_{FC} (₹ in lakh)
(a) GDP_{FC} = 786
(b) Depreciation = 16

Sol. $NDP_{FC} = GDP_{FC} - Depreciation$
$NDP_{FC} = 786 - 16 = ₹\ 770$ lakh

Q 15. Calculate NDP_{MP} (₹ in crore)
(a) GDP_{MP} = 1,010 **(b) Depreciation = 11**

Sol. $NDP_{MP} = GDP_{MP} - Depreciation$
$NDP_{MP} = 1.010 - 11 = ₹\ 999$ crore

Q 16. Calculate GNP_{FC} (₹ in thousand)
(a) NNP_{FC} = 2,000
(b) Consumption of fixed capital = 100

Sol. $GNP_{FC} = NNP_{FC} + CFC$
$GNP_{FC} = 2.000 + 100 = ₹\ 2.100$ thousand

Q 17. Calculate GDP_{MP} (in ₹)
(a) NDP_{MP} = 250
(b) Consumption of fixed capital = 40

Sol. $GDP_{MP} = NDP_{MP} + CFC$
$GDP_{MP} = 250 + 40 = ₹\ 290$

TiPs

- *Gross − Depreciation = Net* whereas *Net + Depreciation = Gross*
- *CRC is current replacement cost which simply means depreciation at macro level.*
- *Depreciation is used to calculate gross value or net value.*
- *We add depreciation, when we are asked to find out gross value from net value.*
- *We subtract depreciation, when we are asked to find out net value from gross value.*

Directions (Q. Nos. 18-19): *Based on the use of 'Net Factor Income from Abroad':*

Q 18. Calculate National income (₹ in lakh)
(a) Domestic Income = 600 **(b) FIFA = 50**
(c) FITA = 70

Sol. NFIA = (FIFA − FITA) = (50 − 70) = − 20
$NNP_{FC} = NDP_{FC}$ (Domestic income) + NFIA
= 600 + (−20) = ₹ 580 lakh

Q 19. Calculate Domestic income (₹ in crore)
(a) National income = 700
(b) FIFA = 30
(c) FITA = 40

Sol. NFIA = (FIFA − FITA) = (30 − 40) = −10
Domestic Income (NDP_{FC}) =
National income (NNP_{FC}) − NFIA
= 700 − (−10) = ₹ 710 crore

TiP

NFIA is used to calculate Domestic Income or National Income

NP/NI − NFIA = DP/DI whereas *DP/DI + NFIA = NP/NI*

Directions (Q. Nos. 20-21): *Based on the use of 'Net Indirect Taxes':*

Q 20. Calculate NDP_{FC} (₹ in crore)
(a) NDP_{MP} = 2,500 **(b) GST = 115**
(c) Subsidies = 15

Sol. NIT = Indirect taxes − Subsidies
= GST − Subsidies
NIT = 115 − 15 = ₹ 100 crore
$NDP_{FC} = NDP_{MP}$ − NIT = 2.500 − 100 = ₹ 2,400 crore

Q 21. Calculate NDP_{MP} (₹ in lakh)
(a) NDP_{FC} = 1,500 **(b) GST = 55**
(c) Subsidies = 15

Sol. NIT = Indirect taxes − Subsidies
= GST − Subsidies
NIT = (55 − 15) = ₹ 40 lakh
$NDP_{MP} = NDP_{FC}$ + NIT = 1.500 + 40 = ₹ 1.540 lakh

TiPs

- *NIT is used to calculate market prices or factor cost.*
- *NIT increases the price of the commodities in the market.*
- *MP − NIT = FC* whereas *FC + NIT = MP*

Q 22. Suppose in a hypothetical economy, there are only two Firms A and B, Firms A sold goods for ₹ 2,000 to Firm B and purchased goods for ₹ 1,000. Firm B exported goods for ₹ 2,500 and had domestic sales of ₹ 1,500. Calculate Net Domestic Product at market price, if consumption of fixed capital is ₹ 200. *(CBSE SQP 2022-23)*

Sol. Value added by firm A = Sales by firm A to B − Purchase of goods by firm A (Intermediate Consumption)
= 2.000−1.000 = ₹ 1.000
Value added by firm B = Sales by firm B (Domestic Sales + Exports)
− Purchase by firm B
= [2.500 + 1.500]− 2.000
= 4.000 − 2.000
= ₹ 2.000
Net Domestic Product at Market Price (NDP_{MP})
= GDP_{MP} − Consumption of fixed capital
= (1.000 + 2.000)− 200
= 3.000 − 200
= ₹ 2.800

Q 23. Calculate value added by firm A and firm B.

S. No.	Particulars	(₹ in lakh)
(i)	Domestic sales by firm A	8.000
(ii)	Sales by firm B	6.000
(iii)	Exports by firm A	1.000
(iv)	Exports by firm B	2.000
(v)	Purchases by firm A	4.000
(vi)	Purchases by firm B	3.000

Sol. Value added by firm A = Domestic sales by firm A + Exports by firm A – Purchases by firm A
= 8,000 + 1,000 – 4,000
= ₹ 5,000 lakh
Value added by firm B = Sales by firm B – Purchases by firm B
= 6,000 – 3,000
= ₹ 3,000 lakh

Knowledge BOOSTER

When domestic sales are given, then we take exports and when sales are given, then we do not take exports separately.

Q 24. Calculate value added by firm A and firm B.

S. No.	Particulars	(₹ in thousand)
(i)	Sales by firm A	10,000
(ii)	Purchases by firm A from firm B	2,000
(iii)	Purchases by firm B from firm A	3,000
(iv)	Closing stock of firm A	700
(v)	Sales by firm B	8,000
(vi)	Closing stock of firm B	600
(vii)	Opening stock of firm A	800
(viii)	Opening stock of firm B	700
(ix)	Sales by firm B to general government	500

Sol. Value added by firm A = Sales by firm A + Change in Stock – Purchases by firm A from firm B
= 10,000 + (700 – 800) – 2,000
= 10,000 – 100 – 2,000
= ₹ 7,900 thousand
Value added by firm B = Sales by firm B + Change in Stock – Purchases by firm B from firm A
= 8,000 + (600 – 700) – 3,000
= 8,000 – 100 – 3,000
= ₹ 4,900 thousand

TiPs

- *When sales are given, then we do not take individual sales again. Like sales by firm B to general government is already included in sales by firm B. Likewise, sales by Firm B to Firm A and sales by Firm A to Firm B will not be taken again.*
- *Change in stock is the difference between closing stock and opening stock.*

Q 25. In an economy, following transactions took place, calculate value of output and value added by firm B:
(i) Firm A sold goods to firm B of ₹ 80 crore, to firm C of ₹ 50 crore, to households ₹ 30 crore and goods of value ₹ 10 crore remain unsold.
(ii) Firm B sold to firm C goods of ₹ 70 crore, to firm D ₹ 40 crore, goods of value of ₹ 30 crore were exported and goods of value ₹ 5 crore were sold to government.

Sol. Value of output of firm B = Sales to firm C + Sales to firm D + Exports + Sales to government
= 70 + 40 + 30 + 5
= ₹ 145 crore
Value added by firm B = Value of output of firm B – Purchases from firm A
= 145 – 80
= ₹ 65 crore

Q 26. From the following data, calculate 'Gross Value Added at Factor Cost':

S. No.	Particulars	(₹ in crore)
(i)	Sales	180
(ii)	Rent	5
(iii)	Subsidies	10
(iv)	Change in stock	15
(v)	Purchase of raw materials	100
(vi)	Profits	25

Sol. Value of Output = Sales + Change in Stock
= 180 + 15 = ₹ 195 crore
GVA_{MP} = Value of Output – Purchase of raw material
= 195 – 100 = ₹ 95 crore
NIT = Indirect Taxes – Subsidies = 0 – 10 = (–)10
Gross Value Added at Factor Cost (GVA_{FC}).
= GVA_{MP} – NIT = 95 – (–10) = ₹ 105 crore

Q 27. From the following data about a firm 'X' for the year 2018-19, calculate the Net Value Added at Market Price during the year:

S. No.	Particulars	(₹ in crore)
(i)	Sales	90
(ii)	Closing stock	25
(iii)	Opening stock	15
(iv)	Indirect taxes	10
(v)	Depreciation	20
(vi)	Intermediate consumption	40
(vii)	Purchase of raw materials	15
(viii)	Rent	5

Sol. Value of Output = Sales + Change in Stock
= 90 + (25 – 15) = ₹ 100 crore
GVA_{MP} = Value of Output – Intermediate Consumption
= 100 – 40 = ₹ 60 crore
NVA_{MP} = GVA_{MP} – Depreciation = 60 – 20 = ₹ 40 crore

Q 28. From the following data about firm 'X', calculate Gross Value Added at Factor Cost by it:

S. No.	Particulars	(₹ in thousand)
(i)	Sales	500
(ii)	Opening stock	30
(iii)	Closing stock	20
(iv)	Purchase of intermediate products	300
(v)	Purchase of machinery	150
(vi)	Subsidy	40

Sol. Value of Output = Sales + Change in Stock
= 500 + (20 – 30)
= ₹ 490 thousand

GVA_{MP} = Value of Output – Purchase of Intermediate products

= 490 – 300

= ₹ 190 thousand

NIT = Indirect taxes – Subsidies

= (0 – 40) = ₹ –40 thousand

$GVA_{FC} = GVA_{MP} – NIT = 190 – (– 40)$

= ₹ 230 thousand

Note: Change in stock is the difference between closing stock and opening stock.

∴ ΔS = Closing Stock – Opening Stock

Q 29. Calculate value of output from the following data:

S. No.	Particulars	(₹ in lakh)
(I)	Net value added at factor cost	100
(ii)	Intermediate consumption	75
(iii)	Goods and Services Tax (GST) or Excise Duty	20
(iv)	Subsidy	5
(v)	Depreciation	10

Sol. $NVA_{MP} = NVA_{FC} + NIT$ (IT – Subsidies)

= 100 + 15 = (20–5) = ₹ 115 lakh

$GVA_{MP} = NVA_{MP} + Depreciation = 115 + 10 = ₹ 125$ lakh

Value of Output = GVA_{MP} + Intermediate Consumption

= 125 + 75 = ₹ 200 lakh

Q 30. Calculate 'Intermediate Consumption' from the following data:

S. No.	Particulars	(₹ in lakh)
(i)	Value of output	200
(ii)	Net value added at factor cost	80
(iii)	Goods and Service Tax (GST) or Sales Tax	15
(iv)	Subsidy	5
(v)	Depreciation	20

Sol. $NVA_{MP} = NVA_{FC} + NIT$

NIT = IT – Subsidy = 15 – 5 = ₹ 10 lakh

NVA_{MP} = 80 + 10 = ₹ 90 lakh

$GVA_{MP} = NVA_{MP} + Depreciation = 90 + 20 = ₹ 110$ lakh

Now, we know that

GVA_{MP} = Value of Output – Intermediate Consumption

110 = 200 – Intermediate Consumption

Intermediate Consumption = 200 – 110 = ₹ 90 lakh

Q 31. Calculate Gross Value Added at Factor Cost.

S. No.	Particulars	
(i)	Units of output sold (units)	1,000
(ii)	Price per unit of output (₹)	30
(iii)	Depreciation (₹)	1,000
(iv)	Intermediate cost (₹)	12,000
(v)	Closing stock (₹)	3,000
(vi)	Opening stock (₹)	2,000
(vii)	Goods and Services Tax or GST (₹)	6,000

Sol. Value of Output = Sales + Change in Stock

= 30,000 + 1,000 = ₹ 31,000

GVA_{MP} = Value of Output – Intermediate Cost

= 31,000 – 12,000 = ₹ 19,000

$GVA_{FC} = GVA_{MP} – NIT$

= 19,000 – (6,000 – 0) = ₹ 13,000

Working Note:

1. Sales = Price × Units sold

   Sales = 30 × 1,000

   Sales = ₹ 30,000

2. Change in Stock = Closing Stock – Opening Stock

   = 3,000 – 2,000 = ₹ 1,000

Q 32. Find Net Value Added at Factor Cost. *(CBSE 2016)*

S. No.	Particulars	(₹ in lakh)
(i)	Durable use producer goods with a life span of 10 years	10
(ii)	Single use producer goods	5
(iii)	Sales	20
(iv)	Unsold output produced during the year	2
(v)	Taxes on production	1

Sol. Value of Output = Sales + Change in Stock

= 20 + 2 = ₹ 22 lakh

GVA_{MP} = Value of Output – Intermediate Consumption

= 22 – 5 = ₹ 17 lakh

$NVA_{MP} = GVA_{MP}$ – Depreciation

= 17 – 1 = ₹ 16 lakh

$NVA_{FC} = NVA_{MP} – NIT = 16 – 1 = ₹ 15$ lakh

Working Note:

$$\text{Depreciation} = \left(\frac{\text{Price of Producer Goods}}{\text{Life Span}}\right)$$

$$\text{Depreciation} = ₹\left(\frac{10,00,000}{10}\right) = ₹ 1,00,000 \text{ or } ₹ 1 \text{ lakh}$$

TiPs

- *Taxes on production means indirect taxes like GST.*
- *Unsold output means Closing Stock – Opening Stock i.e., change in stock.*

Q 33. Calculate 'Sales' from the following data:

S. No.	Particulars	(₹ in lakh)
(i)	Net value added at factor cost	300
(ii)	Net addition to stocks	(–)20
(iii)	Goods and Services Tax (GST)°	30
(iv)	Depreciation	10
(v)	Intermediate consumption	100
(vi)	Subsidy	5

Sol. $NVA_{MP} = NVA_{FC} + NIT = 300 + 25 = ₹325$ lakh

$GVA_{MP} = NVA_{MP} + Depreciation = 325 + 10$

= ₹ 335 lakh

Value of Output = GVA_{MP} + Intermediate Consumption
= 335 + 100 = ₹435 lakh
Value of Output = Sales + Change in Stock
435 = Sales + (–20)
435 + 20 = Sales
∴ Sales = ₹455 lakh

Working Note:

1. NIT = IT – Subsidies
= 30 – 5 = ₹25 lakh
2. Change in Stock = (–) 20 lakh

Q 34. Calculate Net Value Added at Market Price.

S. No.	Particulars	
(i)	Output sold (units)	800
(ii)	Price per unit of output (₹)	20
(iii)	Goods and Services Tax or GST° (₹) (Excise duty, Import duty)	2,000
(iv)	Net changes in stocks (₹)	(–) 500
(v)	Depreciation (₹)	1,000
(vi)	Intermediate consumption (₹)	8,000

Sol. Value of Output = Sales + Change in Stock
= 16,000 + (–500) = ₹ 15,500
GVA_{MP} = Value of Output – Intermediate Consumption
= 15,500 – 8,000 = ₹ 7,500
NVA_{MP} = GVA_{MP} – Depreciation
= 7,500 – 1,000 = ₹ 6,500

Working Note:

1. Sales = Price × Output Sold = 20 × 800
Sales = ₹ 16,000
2. Change in Stock = ₹ (–) 500
3. NIT = IT – Subsidies
= 2,000 – 0 = ₹ 2,000

Q 35. Calculate Net Value Added at Factor Cost.

S. No.	Particulars	
(i)	Consumption of fixed capital (₹)	600
(ii)	Goods and Services Tax or GST (₹)	400
(iii)	Output sold (units)	2,000
(iv)	Price per unit of output (₹)	10
(v)	Net change in stocks (₹)	(–) 50
(vi)	Intermediate cost (₹)	10,000
(vii)	Subsidy (₹)	500

Sol. Value of Output = Sales + Change in Stock
= 20,000 + (–50) = ₹ 19,950
GVA_{MP} = Value of Output – Intermediate Cost
= 19,950 – 10,000 = ₹ 9,950
NVA_{MP} = GVA_{MP} – Consumption of fixed capital
= 9,950 – 600 = ₹ 9,350
NVA_{FC} = NVA_{MP} – NIT = 9,350 – (–100) = ₹ 9,450

Working Note:

1. Sales = Price × Output Sold
= 10 × 2,000
Sales = ₹ 20,000
2. NIT = GST – Subsidy
= 400 – 500 = ₹ (–)100

Q 36. Calculate 'Intermediate Consumption' from the following data: *(CBSE 2019)*

S. No.	Particulars	(₹ in crore)
(i)	Gross value of output	300
(ii)	Net Value Added at Factor Cost (NVA_{FC})	100
(iii)	Subsidies	15
(iv)	Depreciation	30

Sol. NVA_{MP} = NVA_{FC} + NIT = 100 + (–15) = ₹ 85 crore
GVA_{MP} = NVA_{MP} + Depreciation
= 85 + 30 = ₹ 115 crore
GVA_{MP} = Value of Output – Intermediate Consumption
115 = 300 – Intermediate Consumption
Intermediate Consumption = 300 – 115 = ₹ 185 crore

Working Note:

NIT = IT– Subsidies
= (0 – 15)
NIT = ₹ (–) 15 crore

Q 37. Find Net Value Added at Market Price. *(CBSE 2016)*

S. No.	Particulars	(₹ in lakh)
(i)	Fixed Capital good with a life span of 5 years	15
(ii)	Raw materials	6
(iii)	Sales	25
(iv)	Net change in stock	(–) 2
(v)	Taxes on production	1

Sol. Value of Output = Sales + Change in Stock
= 25 + (–2) = ₹ 23 lakh
GVA_{MP} = Value of Output – Intermediate Consumption
= 23 – 6 = ₹ 17 lakh
NVA_{MP} = GVA_{MP} – Depreciation = 17 – 3 = ₹ 14 lakh

Working Note:

1. Depreciation $= \left[\frac{\text{Fixed Asset}}{\text{Life Span}}\right]$

Depreciation $= ₹\left[\frac{15}{5}\right] = ₹\ 3$ lakh

2. NIT = IT – Subsidies
= ₹ (1 – 0)
NIT = ₹ 1 lakh

Q 38. From the data given below, prove that 'Net Value Added at Factor Cost' is equal to 'Income Generated'.

S.No.	Particulars	(₹ in crore)
(i)	Opening stock	1,200
(ii)	Closing stock	1,400
(iii)	Purchase of raw materials	300
(iv)	Sales	1,200
(v)	Corporate tax	100

(vi)	Undistributed profits	50
(vii)	Dividends	50
(viii)	Rent	150
(ix)	Interest	100
(x)	Depreciation	200
(xi)	Indirect taxes	300
(xii)	Subsidies	200
(xiii)	Wages and salaries	250
(xiv)	Mixed income of the self-employed	100

Sol. Value Added Method:

Value of Output = Sales + Change in stock
= 1,200 + 200 = ₹ 1,400 crore

GVA_{MP} = Value of Output – Intermediate Consumption
= 1,400 – 300 = ₹ 1,100 crore

NVA_{MP} = GVA_{MP} – Depreciation
= 1,100 – 200 = ₹ 900 crore

NVA_{FC} = NVA_{MP} – NIT
= 900 – 100 = ₹ 800 crore

Working Note:

1. Change in stock = Closing Stock – Opening Stock
Change in stock = 1400 – 1,200 = ₹ 200 crore

2. NIT = IT – Subsidies
= 300 – 200 = ₹ 100 crore

Income Method:

NDP_{FC} = COE + OS + Mixed Income of the self-employed
= 250 + 450 + 100 = ₹ 800 crore

Working Note:

	+ Rent	150
OS =	+ Interest	100
	+ Royalty	0
	+ Undistributed Profit	50
	+ Corporation Tax	100
	+ Dividends	50
	OS	= ₹ 450 crore

Hence, NVA_{FC} = Income Generated = ₹ 800 crore

Q 39. Calculate Gross Value Added at Factor Cost.

(CBSE 2015)

S. No.	Particulars	(₹ in crore)
(i)	Domestic sales	3,000
(ii)	Change in stock	(–)100
(iii)	Depreciation	300
(iv)	Intermediate consumption	2,000
(v)	Exports	500
(vi)	Indirect taxes	250
(vii)	Net factor income from abroad	(–)50

Sol. Sales = Domestic Sales + Exports
= 3,000 + 500 = ₹ 3,500 crore

Value of Output = Sales + Change in Stock
= 3,500 + (–100) = ₹ 3,400 crore

GVA_{MP} = Value of Output – Intermediate Consumption
= 3,400 – 2,000 = ₹ 1,400 crore

GVA_{FC} = GVA_{MP} – NIT
= 1,400 – 250 = ₹ 1,150 crore

Working Note:

NIT = IT – Subsidies = 250 – 0 = ₹250 crore

Q 40. From the following data, calculate Net Value Added at Factor Cost and Net National Product at Factor Cost:

S. No.	Particulars	(₹ in crore)
(i)	Sales	2,000
(ii)	Factor income to abroad	20
(iii)	Decrease in stock	100
(iv)	Production for self-consumption	500
(v)	Purchase of raw materials	400
(vi)	Exports	50
(vii)	Electricity charges	100
(viii)	Goods and services tax	75
(ix)	Factor income from abroad	10
(x)	Subsidies	25
(xi)	Consumption of fixed capital	200

Sol. Value of Output = Sales + Production for Self-Consumption + Change in Stock
= 2,000 + 500 + (–100)
= ₹ 2,400 crore

GVA_{MP} = Value of Output – Intermediate Consumption
= 2,400 – (Purchase of Raw Materials + Electricity Charges)
= 2,400 – (400 + 100) = ₹ 1,900 crore

NVA_{MP} = GVA_{MP} – Consumption of Fixed Capital
= 1,900 – 200 = ₹ 1,700 crore

NVA_{FC} = NVA_{MP} – Net Indirect Taxes
= 1,700 – [75 – 25] = ₹ 1,650 crore

NNP_{FC} = NVA_{FC} + NFIA
= 1,650 + (10 – 20) = ₹ 1,640 crore

Q 41. Calculate value added by firm A and firm B.

S. No.	Particulars	(₹ in crore)
(i)	Sales by firm A	100
(ii)	Purchases from firm B by firm A	30
(iii)	Purchases from firm A by firm B	50
(iv)	Sales by firm B	200
(v)	Closing stock of firm A	20
(vi)	Closing stock of firm B	35
(vii)	Opening stock of firm A	25
(viii)	Opening stock of firm B	45
(ix)	Indirect taxes paid by both the firms	30
(x)	Depreciation	5

Sol. Value added by Firm A = Sales by Firm A + Change in Stock – Purchases from Firm B by Firm A
= 100 + (20 – 25) – 30
= 100 – 5 – 30
= ₹ 65 crore

Value added by Firm B = Sales by Firm B + Change in Stock – Purchases from Firm B by Firm A
= 200 + (35 – 45) – 50
= 200 + (–10) – 50
= 200 – 10 – 50
= ₹ 140 crore

Q 42. Calculate National Income by Value Added Method/ Output Method.

S.No.	Particulars	(₹ in lakh)
(i)	Intermediate consumption of primary sector	500
(ii)	Intermediate consumption of secondary sector	600
(iii)	Intermediate consumption of tertiary sector	100
(iv)	Value of output of primary sector	1,000
(v)	Value of output of secondary sector	700
(vi)	Value of output of tertiary sector	900
(vii)	Factor income to abroad	40
(viii)	Consumption of fixed capital	200
(ix)	Factor income from abroad	30
(x)	Goods and services tax	75
(xi)	Rent and royalty	150
(xii)	Subsidies	55

Sol. Value of Output of an Economy = Value of $Output_{PS}$ + Value of $Output_{SS}$ + Value of $Output_{TS}$
= 1,000 + 700 + 900 = ₹ 2,600 lakh

Intermediate Consumption of an Economy = (Intermediate $Consumption_{PS}$ + Intermediate $Consumption_{SS}$ + Intermediate $Consumption_{TS}$)
= 500 + 600 + 100 = ₹ 1,200 lakh

GVA_{MP} = Value of Output – Intermediate Consumption
= (2,600 – 1,200) = ₹ 1,400 lakh

NVA_{MP} = GVA_{MP} – Consumption of Fixed Capital
= 1,400 – 200 = ₹ 1,200 lakh

NVA_{FC} = NVA_{MP} – Net Indirect Taxes
= 1,200 – (75 – 55) = ₹ 1,180 lakh

NNP_{FC} = NVA_{FC} + NFIA
= NVA_{FC} + (FIFA – FITA)
= 1,180 + (30 – 40) = 1,180 – 10

NI or NNP_{FC} = ₹ 1,170 lakh

Q 43. A sells raw material worth ₹ 200 to B. B sells the processed goods worth ₹ 300 to C. C sells final goods worth ₹ 400 to consumer households. Depreciation is ₹ 20 and indirect taxes paid by firms is ₹ 10. Calculate Gross Value Added at Market Prices and Net Value Added at Factor Cost.

Sol.

Firms	VoP (in ₹)	IC (in ₹)	GVA_{MP} (in ₹)
(A)			
Sales to B	200	0	200
(B)			
Purchases from A	–	200	100
Sales to C	300	–	–
(C)			
Purchases from B	–	300	100
Sales to consumer households	400	–	–
Total	**900**	**500**	**400**

∴ GVA_{MP} = ₹ 400
NVA_{MP} = GVA_{MP} – Depreciation = 400 – 20 = ₹ 380
NVA_{FC} = NVA_{MP} – Net Indirect Taxes
= 380 – (10 – 0) = ₹ 370

Q 44. From the following data, calculate the value of Domestic Income: *(CBSE SQP 2022, Term-2)*

S. No.	Particulars	(₹ in crore)
(i)	Compensation of employees	2,000
(ii)	Rent and interest	800
(iii)	Indirect taxes	120
(iv)	Corporate tax	460
(v)	Consumption of fixed capital	100
(vi)	Subsidies	20
(vii)	Dividend	940
(viii)	Undistributed profits	300
(ix)	Net factor income from abroad	150
(x)	Mixed income of self-employed	200

Sol. Domestic Income = Compensation of Employees + Rent and interest + Corporate Taxes + Dividends +Undistributed profits + Mixed income of self employed
= 2,000 + 800 + 460 + 940 + 300 + 200
= ₹ 4,700 crore

Q 45. Calculate the value of Domestic Income from the following data:

S. No.	Particulars	(₹ in crore)
(i)	Rent and royalties	1,300
(ii)	Net Indirect taxes	200
(iii)	Wages & salaries (in cash & in kind)	1,700
(iv)	Corporate tax	400
(v)	Depreciation	400
(vi)	Retained earnings	300
(vii)	Dividends	400
(viii)	Net factor income from abroad	(–) 120
(ix)	Mixed income of self-employed	1,400
(x)	Change in stock	(–) 200

(CBSE 2023)

Sol. Domestic Income = Wages and Salaries + Rent and Royalties + Corporation Tax + Retained Earnings + Dividends + Mixed Income of Self-Employed

= 1,700 + 1,300 + 400 + 300 + 400 + 1,400

= ₹ 5,500 crore

Q 46. From the following data, calculate Net Value Added at Factor Cost (NVA_{FC}): *(CBSE 2022, Term-2)*

S. No.	Particulars	(₹ in crore)
(i)	Price per unit of output	20
(ii)	Output sold (units)	1250 units
(iii)	Excise duty	5,000
(iv)	Consumption of fixed capital	1,000
(v)	Change in stock	(–) 500
(vi)	Single use producer goods	6,000

Sol. NVA_{FC} = Sale + Change in stock – Intermediate consumption – Consumption of fixed capital – Excise duty

= (1,250 × 20) + (–500) – 6,000 – 1,000 – 5,000

= 25,000 – 12,500

NVA_{FC} = ₹ 12,500 crore

Q 47. On the basis of the data given below for an imaginary economy, estimate the value of Net Domestic Product at factor cost (NDP_{FC}): *(CBSE 2023)*

S. No.	Particulars	(₹ in crore)
(i)	Household consumption expenditure	2,000
(ii)	Government final consumption expenditure	1,500
(iii)	Gross domestic fixed capital formation	1,000
(iv)	Net additions to stock	300
(v)	Exports	700
(vi)	Net indirect taxes	350
(vii)	Imports	200
(viii)	Consumption of fixed capital	250

Sol. GDP_{MP} = Household Consumption Expenditure + Government Final Consumption Expenditure + Gross Domestic Fixed Capital Formation + Net Additions to Stock + Net Exports

= 2,000 + 1,500 + 1,000 + 300 + (700 – 200)

= ₹ 5,300 crore

NDP_{FC} = GDP_{MP} – Net Indirect Taxes – Consumption of Fixed Capital

= 5,300 – 350 – 250

= ₹ 4,700 crore

Q 48. Calculate National Income.

S. No.	Particulars	(₹ in crore)
(i)	Net current transfer from rest of the world	30
(ii)	Private final consumption expenditure	400
(iii)	Net domestic capital formation	100
(iv)	Change in stock	50
(v)	Depreciation	20
(vi)	Government final consumption expenditure	200
(vii)	Net exports	40
(viii)	Net indirect taxes	80
(ix)	Net factor income paid to abroad	10

Sol. NDP_{MP} = PFCE + GFCE + NDCF + Net Exports

= 400 + 200 + 100 + 40

= ₹ 740 crore

NDP_{FC} = NDP_{MP} – NIT

= 740 – 80

= ₹ 660 crore

NNP_{FC} = NDP_{FC} + NFIA

= 660 + (–10)

= ₹ 650 crore

Q 49. On the basis of the given data, estimate the value of Domestic Income: *(CBSE SQP 2023-24)*

S. No.	Particulars	(₹ in crore)
(i)	Household consumption expenditure	600
(ii)	Gross fixed capital formation	200
(iii)	Change in stock	40
(iv)	Government final consumption expenditure	200
(v)	Net exports	(–) 40
(vi)	Net indirect taxes	120
(vii)	Net factor income from abroad	20
(viii)	Consumption of fixed capital	40

Sol. GDP_{MP} = Household Consumption Expenditure + Government Final Consumption Expenditure + Gross Fixed Capital Formation + Change in Stock + Net Exports

= 600 + 200 + 200 + 40 + (–40)

GDP_{MP} = ₹ 1,000 crore

Domestic Income = GDP_{MP} – Net Indirect Taxes – Consumption of Fixed Capital

= 1,000 – 120 – 40

Domestic Income = ₹ 840 crore

Q 50. Calculate Net National Product at Market Price.

(CBSE 2015)

S. No.	Particulars	(₹ in crore)
(i)	Net factor income to abroad	(–) 10
(ii)	Social security contribution by employees	11
(iii)	Consumption of fixed capital	40
(iv)	Compensation of employees	700
(v)	Corporate tax	30
(vi)	Undistributed profits	10
(vii)	Interest	90
(viii)	Rent	100
(ix)	Dividends	20
(x)	Net indirect tax	110

Sol. NFIA = – Net Factor Income to Abroad

= –(–10) = ₹ 10 crore

Operating Surplus = (Rent + Interest + Royalty + Profit)

= (Rent + Interest + Royalty) + (Undistributed Profits + Corporation Tax + Dividends)

= (100 + 90 + 0) + (10 + 30 + 20)

Operating Surplus = ₹ 250 crore

NDP_{FC} = COE + OS + Mixed Income of Self-employed

= 700 + 250 + 0 = ₹ 950 crore

NDP_{NP} = (NDP_{FC} + NIT)

= (950 + 110) = ₹ 1.060 crore

NNP_{MP} = (NDP_{MP} + NFIA)

= 1.060 + 10 = ₹ 1.070 crore

Q 51. Calculate Net Domestic Product at Market Price.

(CBSE 2015)

S.No.	Particulars	(₹ in crore)
(i)	Private final consumption expenditure	400
(ii)	Opening stock	10
(iii)	Consumption of fixed capital	25
(iv)	Imports	15
(v)	Government final consumption expenditure	90
(vi)	Net factor income to abroad	(–) 5
(vii)	Gross domestic fixed capital formation	80
(viii)	Closing stock	20
(ix)	Exports	10

Sol. Change in Stock = Closing Stock – Opening Stock

= 20 – 10 = ₹ 10 crore

GDCF = GDFCF + Change in Stock

= 80 + 10 = ₹ 90 crore

Net Exports = (X – M) = (10 – 15) = –5 crore

GDP_{MP} = PFCE + GFCE + GDCF + Net Exports

= 400 + 90 + 90 + (–5) = ₹ 575 crore

NDP_{MP} = (GDP_{MP} – Consumption of fixed capital)

= (575 – 25) = ₹ 550 crore

Q 52. Calculate Net National Product at Factor Cost.

(CBSE 2015)

S. No.	Particulars	(₹ in crore)
(i)	Government final consumption expenditure	500
(ii)	Mixed Income	1.500
(iii)	Net indirect taxes	100
(iv)	Net exports	60
(v)	Change in stock	(–) 50
(vi)	Net factor income to abroad	70
(vii)	Net domestic fixed capital formation	250
(viii)	Private final consumption expenditure	2.000
(ix)	Consumption of fixed capital	30

Sol. NFIA = – Net Factor Income to Abroad = –70

NDCF = (NDFCF + Change in Stock)

= 250 + (–50) = ₹ 200

GDP_{MP} = PFCE + GFCE + NDCF + Net Exports + Consumption of Fixed Capital

= 2.000 + 500 + 200 + 60 + 30

= ₹ 2.790 crore

NDP_{MP} = GDP_{MP} – Depreciation

= 2.790 – 30 = ₹ 2.760 crore

NDP_{FC} = NDP_{MP} – NIT

= 2.760 – 100 = ₹ 2.660 crore

NNP_{FC} = NDP_{FC} + NFIA

= [2.660 + (–70)] = ₹ 2.590 crore

Q 53. From the following data, calculate Gross National Product at Market Price: *(CBSE 2015)*

S. No.	Particulars	(₹ in crore)
(i)	Dividends	300
(ii)	Compensation of employees	3.000
(iii)	Rent	500
(iv)	Depreciation	200
(v)	Interest	800
(vi)	Net factor income to abroad	100
(vii)	Mixed Income	5.000
(viii)	Net indirect taxes	400
(ix)	Profit	1.500

Sol. Operating Surplus = Rent + Interest + Royalty + Profit

= 500 + 800 + 0 + 1.500

= ₹ 2.800 crore

NDP_{FC} = COE + OS + Mixed Income

= 3.000 + 2.800 + 5.000

= ₹ 10.800 crore

NDP_{MP} = NDP_{FC} + NIT

= 10.800 + 400 = ₹ 11.200 crore

GDP_{MP} = NDP_{MP} + Depreciation
= 11,200 + 200 = ₹ 11,400 crore
GNP_{MP} = GDP_{MP} + NFIA
= 11,400 + (–100) = ₹ 11,300 crore

Q 54. Calculate National Income. *(CBSE 2015)*

S. No.	Particulars	(₹ in crore)
(i)	Private final consumption expenditure	500
(ii)	Net domestic fixed capital formation	100
(iii)	Net factor income from abroad	30
(iv)	Change in stock	20
(v)	Net exports	40
(vi)	Net indirect taxes	50
(vii)	Mixed income	300
(viii)	Government final consumption expenditure	200
(ix)	Consumption of fixed capital	60

Sol. Net domestic capital formation = Net domestic fixed capital formation + Change in Stock
= 100 + 20 = ₹ 120 crore
NDP_{MP} = PFCE + GFCE + NDCF + Net Exports
= (500 + 200 + 120 + 40) = ₹ 860 crore
NDP_{FC} = NDP_{MP} – NIT
= 860 – 50 = ₹ 810 crore
NNP_{FC} = NDP_{FC} + NFIA
= 810 + 30 = ₹ 840 crore

Q 55. Calculate Net Domestic Product at Market Price. *(CBSE 2016)*

S. No.	Particulars	(₹ in crore)
(i)	Compensation of employees	4,000
(ii)	Dividend	500
(iii)	Mixed Income	8,000
(iv)	Social security contribution by employers	400
(v)	Net factor income to abroad	600
(vi)	Net indirect taxes	1,000
(vii)	Rent	800
(viii)	Consumption of fixed capital	1,200
(ix)	Profit	1,500
(x)	Interest	700

Sol. NFIA = – Net Factor Income to Abroad = –600
OS = Rent + Interest + Royalty + Profit
= 800 + 700 + 0 + 1,500 = ₹ 3,000 crore
NDP_{FC} = COE + OS + Mixed Income
= 4,000 + 3,000 + 8,000 = ₹ 15,000 crore
NDP_{MP} = NDP_{FC} + NIT
= 15,000 + 1,000 = ₹ 16,000 crore

Q 56. Calculate Domestic Income. *(CBSE 2016)*

S. No.	Particulars	(₹ in crore)
(i)	Rent	155
(ii)	Government final consumption expenditure	2,500
(iii)	Subsidies	120
(iv)	Gross domestic fixed capital formation	1,190
(v)	Net factor income to abroad	125
(vi)	Net decrease in inventories	100
(vii)	Net exports	(–) 420
(viii)	Net indirect taxes	470
(ix)	Private final consumption expenditure	2,200
(x)	Current replacement cost	145

Sol. Gross domestic capital formation = Gross domestic fixed capital formation + Change in Stock
= 1,190 + (–100) = ₹ 1,090 crore
GDP_{MP} = PFCE + GFCE + GDCF + Net Exports
= 2,200 + 2,500 + 1,090 + (–420)
= 4,700 + 670 = ₹ 5,370 crore
NDP_{MP} = GDP_{MP} – Current Replacement Cost (depreciation)
= 5,370 – 145 = ₹ 5,225 crore
NDP_{FC} = NDP_{MP} – NIT
= 5,225 – 470 = ₹ 4,755 crore

Q 57. Calculate National Income.

S.No.	Particulars	(₹ in crore)
(i)	Compensation of employees	2,000
(ii)	Rent	400
(iii)	Profit	900
(iv)	Dividend	100
(v)	Interest	500
(vi)	Mixed income of self-employed	7,000
(vii)	Net factor income to abroad	50
(viii)	Net exports	60
(ix)	Net indirect taxes	300
(x)	Depreciation	150

Sol. NFIA = – Net Factor Income to Abroad = –50
OS = Rent + Interest + Royalty + Profit
= 400 + 500 + 0 + 900 = ₹ 1,800 crore
NDP_{FC} = COE + OS + Mixed Income of Self-employed
= 2,000 + 1,800 + 7,000 = ₹ 10,800 crore
NNP_{FC} = NDP_{FC} + NFIA
= 10,800 + (–50) = ₹ 10,750 crore

Q 58. Calculate Net Domestic Product at Factor Cost. *(CBSE 2017)*

S. No.	Particulars	(₹ in crore)
(i)	Dividends	50
(ii)	Social security contributions by employers	40
(iii)	Corporate profit tax	30
(iv)	Consumption of fixed capital	60
(v)	Net factor income to abroad	20
(vi)	Retained earnings of private corporate sector	20

(vii)	Interest	150
(viii)	Net current transfers to rest of the world	(–) 10
(ix)	Rent	100
(x)	Net indirect tax	70
(xi)	Compensation of employees	600

Sol. Profit = Retained Earnings + Corporate profit Tax + Dividend

= 20 + 30 + 50 = ₹ 100 crore

OS = Rent + Interest + Royalty + Profit

= 100 + 150 + 0 + 100 = ₹ 350 crore

NDP_{FC} = COE + OS + Mixed Income

= 600 + 350 + 0 = ₹ 950 crore

Q 59. Calculate Net Domestic Product at Factor Cost.

(CBSE 2017)

S.No.	Particulars	(₹ in crore)
(i)	Private final consumption expenditure	8,000
(ii)	Government final consumption expenditure	1,000
(iii)	Exports	70
(iv)	Imports	120
(v)	Consumption of fixed capital	60
(vi)	Gross domestic fixed capital formation	500
(vii)	Change in stock	100
(viii)	Factor income to abroad	40
(ix)	Factor income from abroad	90
(x)	Indirect taxes	700
(xi)	Subsidies	50
(xii)	Net current transfers to abroad	(–) 30

Sol. Net Exports = (X – M) = (70 – 120) = –50

GDCF = GDFCF + Change in Stock

= 500 + 100 = ₹ 600 crore

NFIA = FIFA – FITA

= 90 – 40 = ₹ 50 crore

NIT = IT – Subsidies

= 700 – 50 = ₹ 650 crore

GDP_{MP} = PFCE + GFCE + GDCF + Net Exports

= 8,000 + 1,000 + 600 + (–50)

= ₹ 9,550 crore

NDP_{MP} = GDP_{MP} – Depreciation

= 9,550 – 60 = ₹ 9,490 crore

NDP_{FC} = NDP_{MP} – NIT

= 9,490 – 650 = ₹ 8,840 crore

Q 60. Calculate Gross National Product at Market Price by: (a) Expenditure Method and (b) Income Method.

(CBSE 2018)

S. No.	Particulars	(₹ in crore)
(i)	Compensation of employees	100
(ii)	Private final consumption expenditure	200
(iii)	Rent	20
(iv)	Government final consumption expenditure	50
(v)	Profits	10
(vi)	Interest	10
(vii)	Gross domestic capital formation	60
(viii)	Net imports	10
(ix)	Consumption of fixed capital	20
(x)	Net indirect taxes	30
(xi)	Net factor income from abroad	(–) 20
(xii)	Change in stocks	10
(xiii)	Mixed Income	110

Sol. Income Method:

OS = Rent + Interest + Royalty + Profit

= 20 + 10 + 0 + 10 = ₹ 40 crore

NDP_{FC} = COE + OS + Mixed Income

= 100 + 40 + 110

= ₹ 250 crore

GDP_{FC} = NDP_{FC} + CFC

= 250 + 20 = ₹ 270 crore

GDP_{MP} = GDP_{FC} + NIT

= 270 + 30 = ₹ 300 crore

GNP_{MP} = GDP_{MP} + NFIA

= 300 + (–20)

= ₹ 280 crore

Expenditure Method:

Net Exports = – Net Imports = –10

GDP_{MP} = PFCE + GFCE + GDCF + Net Exports

= 200 + 50 + 60 + (–10) = ₹ 300 crore

GNP_{MP} = GDP_{MP} + NFIA

= 300 + (–20) = ₹ 280 crore

Q 61. Calculate: (a) Operating Surplus and (b) Domestic Income.

(CBSE 2018)

S. No.	Particulars	(₹ in crore)
(i)	Compensation of employees	2,000
(ii)	Rent and Interest	800
(iii)	Indirect taxes	120
(iv)	Corporation tax	460
(v)	Consumption of fixed capital	100
(vi)	Subsidies	20
(vii)	Dividend	940
(viii)	Undistributed profits	300
(ix)	Net factor income to abroad	150
(x)	Mixed Income	200

Sol. Operating Surplus = [Rent + Interest + Royalty) + [Undistributed Profits + Corporation Tax + Dividend]

OS = (800 + 0 + 460 + 300 + 940) = ₹ 2,500 crore

Domestic $Income_{FC}$ = COE + OS + Mixed Income

= 2,000 + 2,500 + 200

= ₹ 4,700 crore

Q 62. Find National Income from following using expenditure method: *(CBSE 2018)*

S. No.	Particulars	(₹ in crore)
(i)	Current transfers from rest of the world	50
(ii)	Net indirect taxes	100
(iii)	Net exports	(–) 25
(iv)	Rent	90
(v)	Private final consumption expenditure	900
(vi)	Net domestic capital formation	200
(vii)	Compensation of employees	500
(viii)	Net factor income from abroad	(–) 10
(ix)	Government final consumption expenditure	400
(x)	Profit	220
(xi)	Mixed income of self-employed	400
(xii)	Interest	230

Sol. NDP_{MP} = PFCE + GFCE + NDCF + Net Exports
= 900 + 400 + 200 + (–25)
= ₹ 1,475 crore
NDP_{FC} = NDP_{MP} – NIT
= 1,475 – 100 = ₹ 1,375 crore
NNP_{FC} = NDP_{FC} + NFIA
= 1,375 + (–10) = ₹ 1,365 crore

Q 63. Calculate the value of 'Rent' from the following data: *(CBSE 2019)*

S. No.	Particulars	(₹ in crore)
(i)	Gross domestic product at market price	18,000
(ii)	Mixed income of self-employed	7,000
(iii)	Subsidies	250
(iv)	Interest	800
(v)	Rent	?
(vi)	Profit	975
(vii)	Compensation of employees	6,000
(viii)	Consumption of fixed capital	1,000
(ix)	Indirect tax	2,000

Sol. NDP_{MP} = GDP_{MP} – Consumption of Fixed Capital
= 18,000 – 1,000 = ₹ 17,000 crore
NIT = IT – Subsidies
= 2,000 – 250 = ₹ 1,750 crore
NDP_{FC} = NDP_{MP} – NIT
= 17,000 – 1,750 = ₹ 15,250 crore
NDP_{FC} = COE + OS + Mixed Income of Self-employed
15,250 = 6,000 + OS + 7,000
15,250 – 13,000 = OS
Operating Surplus = ₹ 2,250 crore
Rent + Interest + Royalty + Profit = 2,250
Rent + 800 + 0 + 975 = 2,250
Rent + 1,775 = 2,250
Rent = 2,250 – 1,775
Rent = ₹ 475 crore

Q 64. Given the following data, find the values of 'Operating Surplus' and 'Net Exports': *(CBSE 2019)*

S. No.	Particulars	(₹ in crore)
(i)	Wages and salaries	2,400
(ii)	National Income	4,200
(iii)	Net exports	?
(iv)	Net factor income from abroad	200
(v)	Gross domestic capital formation	1,100
(vi)	Mixed income of self-employed	400
(vii)	Private final consumption expenditure	2,000
(viii)	Net indirect taxes	150
(ix)	Operating surplus	?
(x)	Government final consumption expenditure	1,000
(xi)	Consumption of fixed capital	100
(xii)	Profits	500

Sol. Working Notes

1. NDP_{FC} = NNP_{FC} – NFIA = 4,200 – 200
= ₹4,000 crore
2. GDP_{FC} = NDP_{FC} + Consumption of fixed capital
= 4,000 + 100
= ₹ 4,100 crore
3. GDP_{MP} = GDP_{FC} + NIT
= 4,100 + 150
GDP_{MP} = ₹ 4,250 crore

Expenditure Method:
GDP_{MP} = PFCE + GFCE + GDCF + Net Exports
4,250 = 2,000 + 1,000 + 1,100 + Net Exports
4,250 = 4,100 + Net Exports
4,250 – 4,100 = Net Exports
Net Exports = ₹ 150 crore

Income Method:
NDP_{FC} = COE + OS + Mixed Income of self-employed
4,000 = 2,400 + OS + 400
4,000 – 2,800 = OS
Operating Surplus = ₹ 1,200 crore

Q 65. Calculate value of 'Interest' from the following data: *(CBSE 2019)*

S. No.	Particulars	(₹ in crore)
(i)	Indirect tax	1,500
(ii)	Subsidies	700
(iii)	Profits	1,100
(iv)	Consumption of fixed capital	700
(v)	Gross domestic product at market price	17,500
(vi)	Compensation of employees	9,300
(vii)	Interest	?
(viii)	Mixed income of self-employed	3,500
(ix)	Rent	800

Sol. Working Note:

1. GDP_{MP} = ₹ 17,500 crore

$NDP_{MP} = GDP_{MP} - CFC$

$= 17,500 - 700$

= ₹ 16,800 crore

2. $NIT = IT - Subsidies$

$= 1,500 - 700$ = ₹ 800 crore

3. $NDP_{FC} = NDP_{MP} - NIT$

$= 16,800 - 800$

= ₹ 16,000 crore

Income Method:

NDP_{FC} = COE + OS + Mixed Income of self-employed

$16,000 = 9,300 + OS + 3,500$

$16,000 - 12,800 = OS$

OS = ₹ 3,200

OS = Rent + Interest + Royalty + Profit

3,200 = 800 + Interest + 0 + 1,100

Interest = 3,200 − 1,900 = ₹ 1,300 crore

Q 66. Given the following data, find the missing values of 'Private Final Consumption Expenditure' and 'Operating Surplus': *(CBSE 2019)*

S. No.	Particulars	(₹ in crore)
(i)	National income	50,000
(ii)	Net indirect taxes	1,000
(iii)	Private Final Consumption Expenditure (PFCE)	?
(iv)	Gross domestic capital formation	17,000
(v)	Profits	1,000
(vi)	Government Final Consumption Expenditure (GFCE)	12,500
(vii)	Wages and salaries	20,000
(viii)	Consumption of fixed capital	700
(ix)	Mixed income of self-employed	13,000
(x)	Operating surplus	?
(xi)	Net factor income from abroad	500
(xii)	Net exports	2,000

Sol. Working Note:

1. NNP_{FC} = ₹ 50,000 crore

NFIA = ₹ 500

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

$= 50,000 - 500$ = ₹ 49,500 crore

2. $GDP_{FC} = NDP_{FC}$ + Consumption of fixed capital

$= 49,500 + 700$ = ₹ 50,200 crore

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

$= 50,200 + 1,000$ = ₹ 51,200 crore

Income Method:

NDP_{FC} = COE + OS + Mixed Income of self-employed

$49,500 = 20,000 + OS + 13,000$

$49,500 - 33,000 = OS$

OS = ₹ 16,500 crore

Expenditure Method:

GDP_{MP} = PFCE + GFCE + GDCF + Net Exports

$51,200 = PFCE + 12,500 + 17,000 + 2,000$

$PFCE = 51,200 - 31,500$

PFCE = ₹ 19,700 crore

Q 67. Calculate the value of 'Mixed Income of Self-employed' from the following data: *(CBSE 2019)*

S. No.	Particulars	(₹ in crore)
(i)	Compensation of employees	17,300
(ii)	Interest	1,200
(iii)	Consumption of fixed capital	1,100
(iv)	Mixed Income of self-employed	?
(v)	Subsidies	750
(vi)	Gross domestic product at market price	27,500
(vii)	Indirect taxes	2,100
(viii)	Profits	1,800
(ix)	Rent	2,000

Sol. Working Note:

1. GDP_{MP} = ₹ 27,500 crore

NIT = IT − Subsidies = 2,100 − 750 = ₹1,350 crore

$NDP_{MP} = GDP_{MP}$ − Depreciation

$= 27,500 - 1,100$ = ₹ 26,400 crore

2. $NDP_{FC} = NDP_{MP} - NIT$

= 26,400 − 1,350 = ₹ 25,050 crore

3. Operating Surplus = (Rent + Interest + Royalty + Profit)

= 2,000 + 1,200 + 0 + 1,800

OS = ₹ 5,000 crore

Income Method:

NDP_{FC} = COE + OS + Mixed Income of self-employed

25,050 = 17,300 + 5,000 + Mixed Income of self-employed

Mixed Income of self-employed = 25,050 − 22,300

Mixed Income of self-employed = ₹ 2,750

Q 68. Given the following data, find the missing value of 'Government Final Consumption Expenditure' and 'Mixed Income of Self-employed'. *(CBSE 2019)*

S. No.	Particulars	(₹ in crore)
(i)	National Income	71,000
(ii)	Gross domestic capital formation	10,000
(iii)	Government final consumption expenditure	?
(iv)	Mixed income of self-employed	?
(v)	Net factor income from abroad	1,000
(vi)	Net indirect taxes	2,000
(vii)	Profits	1,200
(viii)	Wages and salaries	15,000
(ix)	Net exports	5,000
(x)	Private final consumption expenditure	40,000
(xi)	Consumption of fixed capital	3,000
(xii)	Operating surplus	30,000

Sol. Working Note:

1. NNP_{FC} = 71,000

NFIA = 1,000

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

$= 71,000 - 1,000$ = ₹ 70,000 crore

2. $GDP_{FC} = NDP_{FC}$ + Consumption of fixed capital

$= 70,000 + 3,000$ = ₹ 73,000 crore

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

$= 73,000 + 2,000 = ₹ 75,000$ crore

Income Method:

$NDP_{FC} = COE + OS + Mixed\ Income\ of\ self\text{-}employed$

$70,000 = 15,000 + 30,000 + Mixed\ Income\ of\ self\text{-}employed$

Mixed Income of self-employed = 70,000 – 45,000

Mixed Income of self-employed = ₹ 25,000 crore

Expenditure Method:

$GDP_{MP} = PFCE + GFCE + GDCF + Net\ Exports$

$75,000 = 40,000 + GFCE + 10,000 + 5,000$

$75,000 = 55,000 + GFCE$

$GFCE = 75,000 - 55,000$

GFCE = ₹ 20,000 crore

Q 69. Given the following data, find the missing values of 'Gross Domestic Capital Formation' and 'Wages and Salaries': *(CBSE 2019)*

S.No.	Particulars	(₹ in crore)
(i)	Mixed Income of self-employed	3,500
(ii)	Net indirect taxes	300
(iii)	Wages and salaries	?
(iv)	Government final consumption expenditure	14,000
(v)	Net exports	3,000
(vi)	Consumption of fixed capital	300
(vii)	Net factor income from abroad	700
(viii)	Operating surplus	12,000
(ix)	National income	30,000
(x)	Profits	500
(xi)	Gross domestic capital formation	?
(xii)	Private final consumption expenditure	11,000

Sol. Working Note:

1. $NNP_{FC} = 30,000$

$NFIA = 700$

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

$= 30,000 - 700 = ₹ 29,300$ crore

2. $GDP_{FC} = NDP_{FC} + Consumption\ of\ fixed\ capital$

$= 29,300 + 300 = ₹ 29,600$ crore

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

$= 29,600 + 300 = ₹ 29,900$ crore

Income Method:

$NDP_{FC} = COE + OS + Mixed\ Income\ of\ self\text{-}employed$

$29,300 = COE + 12,000 + 3,500$

$29,300 - 15,500 = COE$

Wages and Salaries (COE) = ₹ 13,800 crore

Expenditure Method:

$GDP_{MP} = PFCE + GFCE + GDCF + Net\ Exports$

$29,900 = 11,000 + 14,000 + GDCF + 3,000$

$29,900 = 28,000 + GDCF$

$29,900 - 28,000 = GDCF$

GDCF = ₹ 1,900 crore

Q 70. Calculate Compensation of Employees from the following data: *(CBSE 2020)*

S.No.	Particulars	(₹ in crore)
(i)	Profits after tax	20
(ii)	Interest	45
(iii)	Gross domestic product at market price	200
(iv)	Goods and services tax	10
(v)	Consumption of fixed capital	50
(vi)	Rent	25
(vii)	Corporate tax	5

Sol. Profit before Tax or Profit = Profit after Tax + Corporate Tax = 20 + 5 = ₹ 25 crore

NIT = (GST – Subsidies) = (10 – 0) = ₹ 10 crore

$NDP_{MP} = GDP_{MP} - Consumption\ of\ Fixed\ Capital$

$= 200 - 50 = ₹ 150$ crore

$NDP_{FC} = NDP_{MP} - NIT = 150 - 10 = ₹ 140$ crore

Now, $NDP_{FC} = COE + OS + Mixed\ Income\ of\ self\text{-}employed$

$140 = COE + (Rent + Interest + Royalty + Profit) + Mixed\ Income\ of\ self\text{-}employed$

$140 = COE + (25 + 45 + 0 + 25) + (0)$

$140 = COE + 95$

$COE = 140 - 95$

COE = ₹ 45 crore

Q 71. From the following data relating to an economy, calculate National Income by Expenditure, Income and Value Added Method:

S. No.	Particulars	(₹ in crore)
(i)	Interest	80
(ii)	**Value of output:**	
	(a) Primary sector	2,000
	(b) Secondary sector	1,000
	(c) Tertiary sector	900
(iii)	Compensation of employees	490
(iv)	Net factor income from abroad	(–) 10
(v)	Private final consumption expenditure	1,030
(vi)	**Intermediate cost:**	
	(a) Primary sector	1,260
	(b) Secondary sector	620
	(c) Tertiary sector	530
(vii)	Rent and royalty	50
(viii)	Government final consumption expenditure	150
(ix)	Gross domestic fixed capital formation	260
(x)	Opening stock	80
(xi)	Profit	60
(xii)	Closing stock	140
(xiii)	Net exports	(–) 10
(xiv)	Net indirect taxes	160
(xv)	Consumption of fixed capital	80
(xvi)	Mixed income of self-employed	570

Sol. Value Added Method:

$\text{Value of Output}_{\text{Economy}} = \text{Value of Output}_{PS} + \text{Value of Output}_{SS} + \text{Value of Output}_{TS}$
$= 2,000 + 1,000 + 900$
$= ₹\ 3,900 \text{ crore}$

$\text{Intermediate Consumption}_{\text{Economy}} = \text{Intermediate Consumption}_{PS} + \text{Intermediate Consumption}_{SS} + \text{Intermediate Consumption}_{TS}$
$= 1,260 + 620 + 530 = ₹\ 2,410 \text{ crore}$

GVA_{MP} = Value of Output − Intermediate Consumption
$= 3,900 - 2,410$
$= ₹\ 1,490 \text{ crore}$

$NVA_{MP} = GVA_{MP} - \text{Consumption of fixed Capital}$
$= 1,490 - 80 = ₹\ 1,410 \text{ crore}$

$NVA_{FC} = NVA_{MP} - NIT$
$= 1,410 - 160 = ₹\ 1,250 \text{ crore}$

$NNP_{FC} = NVA_{FC} + NFIA$
$1,250 + (-10) = ₹\ 1,240 \text{ crore}$

Income Method:

$NDP_{FC} = COE + OS + \text{Mixed Income of self-employed}$
$OS = \text{Rent} + \text{Interest} + \text{Royalty} + \text{Profit}$
$OS = 50 + 80 + 60 = ₹\ 190 \text{ crore}$
$NDP_{FC} = 490 + 190 + 570 = ₹1,250 \text{ crore}$
$NNP_{FC} = NDP_{FC} + NFIA$
$= 1,250 + (-10) = ₹\ 1,240 \text{ crore}$

Expenditure Method:

$GDCF = GDFCF + \text{Change in Stock}$
$= 260 + 60 = ₹\ 320$
$\text{Change in Stock} = \text{Closing Stock} - \text{Opening Stock}$
$= 140 - 80 = ₹\ 60 \text{ crore}$
$GDP_{MP} = PFCE + GFCE + GDCF + \text{Net Exports}$
$= 1,030 + 150 + 320 + (-10) = ₹\ 1,490 \text{ crore}$
$NDP_{MP} = GDP_{MP} - \text{Consumption of fixed Capital}$
or $CFC = 1,490 - 80 = ₹\ 1,410 \text{ crore}$
$NDP_{FC} = NDP_{MP} - NIT$
$= 1,410 - 160 = ₹\ 1,250 \text{ crore}$
$NNP_{FC} = NDP_{FC} + NFIA$
$= 1,250 + (-10) = ₹\ 1,240 \text{ crore}$

Q 72. Calculate Net Value Added at Factor Cost. *(CBSE 2020)*

S. No.	Particulars	(₹ in crore)
(i)	Value of output	800
(ii)	Intermediate consumption	200
(iii)	Indirect taxes	30
(iv)	Depreciation	20
(v)	Subsidies	50
(vi)	Purchase of machinery	50

Sol. GVA_{MP} = Value of Output − Intermediate Consumption
$= 800 - 200$
$= ₹\ 600 \text{ crore}$
$NVA_{MP} = GVA_{MP} - \text{Depreciation}$
$= 600 - 20 = ₹\ 580 \text{ crore}$
$NVA_{FC} = NVA_{MP} - NIT$
$NVA_{FC} = 580 - (-20)$
$= ₹\ 600 \text{ crore}$

Working Note:
$NIT = IT - \text{Subsidies}$
$= 30 - 50 = (-20)$

Chapter Test

Multiple Choice Questions

Q 1. Macroeconomics is concerned with:
a. GDP growth
b. General price level
c. Level of output in the economy
d. All of the above

Q 2. Which of the following is a flow?
a. Deposits in a bank as on 1st January, 2021
b. Depreciation
c. Capital
d. Wealth

Fill in the Blank Type Questions

Q 3. The income received by factors of production is called ..... income.

(Choose the correct alternative to fill up the blank)
a. factor
b. transfer
c. mixed
d. real

Q 4. ..... are the economic assistance given by government to the firms and households with a motive of general welfare.

(Choose the correct alternative to fill up the blank)
a. Indirect taxes
b. Factor incomes
c. Subsidies
d. Transfer incomes

True/False Type Question

Q 5. A normal resident can be foreigner.

Match the Column Type Question

Q 6. From the following statements given in Column I and Column II, choose the correct pair of statements:

Column I	Column II
A. Indirect Tax	1. Expected obsolescence
B. Depreciation	2. Bread and Butter
C. Consumption Goods	3. Goods and Services Tax
D. Transfer Income	4. Scholarship

	A	B	C	D
a.	1	2	3	4
c.	4	3	2	1

	A	B	C	D
b.	3	1	2	4
d.	2	4	1	3

Assertion and Reason Type Questions

Directions (Q.Nos. 7-8): *There are two statements marked as Assertion (A) and Reason (R). Read the statements and choose the appropriate option from the options given below:*

a. Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).

b. Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A).

c. Assertion (A) is true, but Reason (R) is false.

d. Assertion (A) is false, but Reason (R) is true.

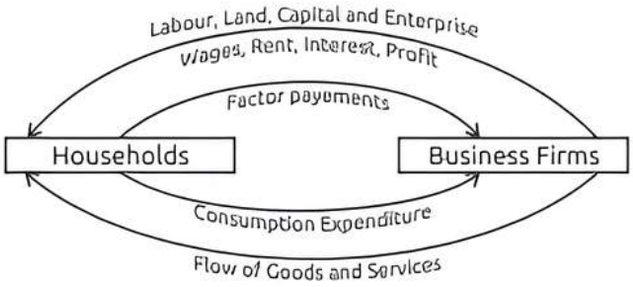
Q 7. Assertion (A): Problem of unemployment in India is an example of Macroeconomics.
Reason (R): Because macroeconomics deals with the economy as a whole.

Q 8. Assertion (A): Stock variable does not have time dimension.
Reason (R): Stock variable is measured over a period of time.

Case Study Based Questions

Q 9. Read the extract given below and answer the questions on the basis of same:

In the given figure we can see that upper loop shows the resources such as land, capital and entrepreneurial ability flow from households to firms in the direction shown by the arrow direction.



The money flows from firms to the households as factor payments in the form of wages, rent, interest and profits, shown by the arrow direction. The lower part of the figure shows the flows of money from households to firms in the form of consumption expenditure done by the households to purchase the goods and services produced by the firms, making the flow of goods and services from firms to households.

Thus, we see that money flows from business firms to households to firms. Thus there is, infact, a circular flow of money or income. This is how the economy functions.

(i) Money flows from ..... to ..... as factor payments.

a. firms, households
b. households, firms
c. government, firms
d. households, government

(ii) Circular flow of income refers to the flow of activities of production, income generation and expenditure involving different ..... of the economy.

a. type
b. sector
c. aspect
d. factor

(iii) Which of the following is not the significance of circular flow of income?

a. It reflects structure of an economy.
b. It shows interdependence among different sectors.
c. It shows injections and leakages from flow of money.
d. It does not help in estimation of national income and related aggregates.

(iv) Which of the following is not an assumption of a two sector model of circular flow of income?

a. Domestic economy comprises only two sectors, the producers and households.
b. The households spend their entire income, so that there is no saving.
c. Domestic economy is an open economy (no exports and imports)
d. There is no government in the economy.

Q 10. Read the extract given below and answer the questions on the basis of same:

Rohan is an entrepreneur who manufactures decorative items. He is at the helm of affairs. He hires wage labour from the market and employs the services of capital and land as well. After hiring the inputs, he undertakes the task of production which involves conversion of raw material into finished products.

His motive is to ensure the optimal utilisation of the available inputs and to produce output for sale in the market and maximise profit.

His products are also available on e-commerce websites and are not limited only to domestic consumers but to consumers of other countries as well thus, ensuring inter-regionalism.

However in this process, he undertakes risks and uncertainties. For example, he may not get a right price for his product which in turn would minimise his profit level. There is also a possibility that the goods might damage during shipping process.

(i) Rohan is selling in foreign countries as well. If it is to be a model of circular flow of income, which model it should be?

(ii) Rohan sells his goods in countries like America, Belgium and Germany. Trade with these countries includes which sector of an economy.

Very Short Answer Type Questions

Q 11. What do you mean by subsidies?

Q 12. Give two examples of final goods.

Short Answer Type-I Question

Q 13. "Final goods include only those goods which are consumed by the households." Defend or refute the given statement with valid reason.

Short Answer Type-II Question

Q 14. "Gross Domestic Product (GDP) does not give us a clear indication of economic welfare of a country". Defend or refute the given statement with valid reason.

Long Answer Type Question

Q 15. Suppose a ban is imposed on consumption of tobacco. Examine its likely affects on :

(i) Gross Domestic Product; and

(ii) Welfare

Numerical Type Question

Q 16. Calculate (a) Operating Surplus and (b) Domestic Income:

S. No.	Particulars	(₹ in crore)
(i)	Compensation of employees	2.000
(ii)	Rent and interest	800
(iii)	Indirect taxes	120
(iv)	Corporation tax	460
(v)	Consumption of fixed capital	100
(vi)	Subsidies	20
(vii)	Dividend	940
(viii)	Undistributed profits	300
(ix)	Net factor income to abroad	150
(x)	Mixed income	200