National Income Accounting

1. Identify the correct equation from the following : (2024)

(A) $GDP_{MP} = NNP_{FC}$ + Depreciation

(B) $NDP_{FC} = NNP_{FC}$ + Net Indirect Taxes

(C) $GNP_{MP} = GDP_{MP}$ + Net Factor Income from Abroad

(D) $NNP_{FC} = NDP_{MP}$ + Depreciation

Ans. (C) $GNP_{MP} = GDP_{MP}$ + Net Factor Income from Abroad

2. Find the missing figures and choose the correct alternative : (2024)

Round	Deposits	Loans (80%)	Reserve Ratio (20%)
I	5000	4000	..(i)..
II	4000	..(ii)..	800
...	...	...	...
...	...	...	...
Total	..(iii)..	..(iv)..	5000

Alternatives :

(A) 1000, 800, 20000, 25000

(B) 5000, 3200, 25000, 20000

(C) 1000, 3200, 25000, 20000

(D) 1000, 800, 20000, 25000

Ans. (C) 1000, 3200, 25000, 20000

3. Suppose for a hypothetical economy :

$C = 100 + 0{\cdot}75Y$ (where C = Consumption and Y = Income)

$I_0 = 400$ (I_0 = Autonomous Investment)

Value of Investment Multiplier (K) would be _____. (2024)

(Choose the correct alternative to fill in the blank)

(A) 5

(B) 4

(C) 6

(D) 3

Ans. (B) 4

4. On the basis of the data given below for an imaginary economy, estimate the value of Net Domestic Product at Factor Cost (NDP_{FC}) : (2024)

S. No.	Items	Amount (in ₹ crore)
(i)	Gross Domestic Fixed Capital Formation	200
(ii)	Exports	50
(iii)	Government Final Consumption Expenditure	320
(iv)	Consumption of Fixed Capital	35
(v)	Household Final Consumption Expenditure	470
(vi)	Inventory Investment (Net)	(–) 40
(vii)	Imports	60
(viii)	Net Indirect Taxes	50
(ix)	Net Factor Income from Abroad	20

Ans. Net Domestic Product at Factor Cost (NDP_{FC}) = (v)+(iii)+(i)+(vi)+(ii-vii)-(iv)-(viii)

= 470+320+200+(-40)+(50-60)-35-50

= ₹ 855 crore

5. Define Operating Surplus. (2024)

Ans. Factor income earned in the form of rent, royalties, interest and profits are together called 'Operating Surplus'.

6. Discuss briefly the concept of circular flow of income in a two-sector model. (2024)

Ans. In a two-sector economy model, households are the owners of factors of production (Land, Labour, Capital, Entrepreneur). Firms combine these factors of production to produce goods and services. They make factor payments (Rent,

wages, Interest, Profits) to households, which in turn, are spent by the households on the consumption of final goods and services.

Thus, the income earned by the factors of production flows back to the production units in the form of aggregate consumption expenditure. Thereby, completing the circular flow of income.

7. "Real Gross Domestic Product (GDP) is a better indicator of economic growth of a nation as compared to the Nominal Gross Domestic Product (GDP)."

Do you agree with the given statement? Justify your answer with a valid hypothetical numerical example. (2024)

Ans. Yes. Real Gross Domestic Product (GDP) is the money value of all the final goods and services produced in the domestic territory of an economy, measured at base year prices. Whereas, Nominal Gross Domestic Product (GDP) is money value of all the final goods and services produced in the domestic territory of an economy, measured at current year prices.

For example:

Year	Price (in ₹)	Output (in units)	Real GDP (P_0Q_1)	Nominal GDP (P_1Q_1)
2010 (Base Year)	10	100	1,000	1,000
2011 (Current Year)	15	100	1,000	1,500

Real GDP is a better indicator to make comparison in terms of physical output and it eliminates the effect of price change.

Previous Years' CBSE Board Questions

2.1 Some Basic Concepts of Macroeconomics

MCQ

1. Depreciation of fixed capital assets refer to :
   (a) Normal wear and tear
   (b) Foreseen obsolescence
   (c) Normal wear and tear and foreseen obsolescence
   (d) Unforeseen obsolescence. *(Delhi 2016)*
2. Which of the following is not a flow?
   (a) Capital (b) Income
   (c) Investment (d) Depreciation
   (Delhi 2015 C)
3. Which of the following is a stock?
   (a) Wealth (b) Savings
   (c) Exports (d) Profits *(AI 2015 C)*

VSA (1/2 mark)

4. Distinguish between 'Fixed Investment and Inventory Investment'. *(Term-II, 2021-22)*
5. Distinguish between stock and flow variables. *(Term-II, 2021-22)*
6. State whether the following statement is true or false: "Expected obsolescence is included in depreciation." *(2020)* U
7. Define stocks. *(Delhi 2016)*
8. Define flows. *(AI 2016)* R
9. Define consumption goods. *(Delhi 2014 C)*
10. Give two examples of intermediate goods. *(Delhi 2014 C)*
11. Define investment. *(Delhi 2014 C)*
12. Give the meaning of depreciation. *(AI 2014 C)*

SA I (3 marks)

13. Calculate the value of "Change in Stock" from the following data:

S.No.	Items	Amount (in ₹ Crore)
i.	Sales	400
ii.	Net Value Added at factor cost (NVA_{FC})	200
iii.	Subsidies	10
iv.	Change in Stock	?
v.	Depreciation	40

14. "Final goods include only those goods which are consumed by the households". Defend or refute the given statement with valid reason. *(2020)*
15. Give any two examples of flow concept. *(2019)*
16. What are capital goods? How are they different from consumption goods? *(2018)*
17. Distinguish between stocks and flows. Give an example of each. *(AI 2014 C)* R

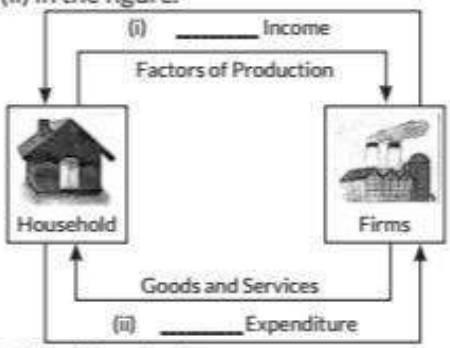
SA II (4 marks)

18. Distinguish between intermediate goods and final goods. Give an example of each. *(Delhi 2015 C)*

2.2 Circular Flow of Income and Methods of Calculating National Income

MCQ

19. Choose the correct alternative to fill in the blanks in (i) and (ii) in the figure.



   (a) National, Production
   (b) Factor, Production
   (c) Factor, Consumption
   (d) National, Consumption *(2023)*
20. Operating Surplus does not include _____.
   (a) Interest
   (b) Rent
   (c) Profit
   (d) Compensation of employees *(2023)*

VSA (1 mark)

21. Explain the circular flow of income. *(Delhi 2015 C, AI 2015 C, Delhi 2014 C)* An

SA I (3 marks)

22. "While estimating Gross Domestic Product (GDP) by expenditure method, entire focus is on expenditures

23. 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 asset by a firm. *(2023)*

24. On the basis of the following data, calculate the value of Gross Value Added (GVA) at Market Price:

S.No.	Particulars	Amount (in ₹ lakh)
(i)	Depreciation	20
(ii)	Domestic Sales	200
(iii)	Change in stock	(–) 10
(iv)	Exports	10
(v)	Single Use Producer Goods	120

(Term-II, 2021-22)

25. Giving valid reasons, explain how the following would be treated while estimating domestic income?
(i) Payment made by a Japanese tourist for goods purchased in India.
(ii) Broker's commission on the sale of second hand goods. *(Term-II, 2021-22)*

26. "Circular flow principle is based on the assumption that one's expenditure will become other's income". Explain the given statement. *(2020)*

27. Define the problem of double counting in the computation of national income. State any two approaches to correct the problem of double counting. *(2019)*

28. Find Net Value Added at factor cost :

		(₹ Lacs)
(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

(Delhi 2016)

29. Find Net Value Added at market price :

		(₹ Lacs)
(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

(Delhi 2016)

30. Find the Gross Value Added at market price :

		(₹ Lacs)
(i)	Depreciation	20
(ii)	Domestic sales	200
(iii)	Net change in stocks	(–)10
(iv)	Exports	10
(v)	Single producer goods	120

(Delhi 2016)

SA II (4 marks)

31. What any four precautions should be taken while estimating national income by income method ? *(Term-II, 2021-22, AI 2015 C)* R

32. From the following data, calculate net value added at factor cost.

		(₹ Lacs)
(i)	Sales	300
(ii)	Opening stock	40
(iii)	Depreciation	30
(iv)	Intermediate consumption	120
(v)	Exports	50
(vi)	Change in stock	20
(vii)	Net indirect taxes	15
(viii)	Factor income to abroad	10

(Delhi 2015 C)

33. Describe the expenditure method of calculating Gross Domestic Product at market price. *(AI 2015 C)*

34. Calculate Gross Value Added at factor cost.

		(₹ in Crore)
(i)	Domestic sales	3000
(ii)	Change in stock	(–) 100
(iii)	Depreciation	300
(iv)	Intermediate consumption	2000
(v)	Exports	500
(vi)	Indirect taxes	250
(vii)	Net factor income from abroad	(–) 50

(AI 2015 C) Ap

35. Calculate "Net Value Added at factor cost" from the following data :

		(₹ in Lacs)
(i)	Intermediate consumption	300
(ii)	Change in stock	50
(iii)	Net indirect taxes	70
(iv)	Sales	500
(v)	Consumption of fixed capital	20
(vi)	Imports	40

(Delhi 2014 C)

36. From the following data calculate "Net Value Added at factor cost" :

		(₹ in Lacs)
(i)	Sales	400
(ii)	Change in stock	(–) 20
(iii)	Intermediate consumption	200
(iv)	Net indirect taxes	40
(v)	Exports	50
(vi)	Depreciation	30

(AI 2014 C)

LA (5/6 marks)

37. State the meaning of:
    (a) Problem of Double Counting
    (b) Operating Surplus
    (c) Compensation of Employees. *(2023)* U

38. Given the following data, find the missing value of 'Government Final Consumption Expenditure' and 'Mixed Income of Self Employed:

S.No.	Items	Amount 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)	Fixed Capital	3,000
(xii)	Operating Surplus	30,000

(2019)

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

		(₹ is 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

(2018) Ap

40. Calculate (a) net domestic product at factor cost and (b) gross national disposable income:

		₹ in Crore
(i)	Private final consumption expenditure	8000
(ii)	Government final consumption expenditure	1000
(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

(Delhi 2017)

41. Find National Income and private income :

		(₹ in Crore)
(i)	Wages and Salaries	1000
(ii)	Net current transfers to abroad	20
(iii)	Net factor income paid to abroad	10
(iv)	Profit	400
(v)	National debt interest	120
(vi)	Social security contributions by employers	100
(vii)	Current transfers from government	60
(viii)	National income accruing to government	150
(ix)	Rent	200
(x)	Interest	300
(xi)	Royalty	50

(Delhi 2016)

42. Find Net Domestic Product at factor cost and personal income :

		(₹ in Crore)
(i)	Rent	200
(ii)	Net current transfers to abroad	10
(iii)	National debt interest	60
(iv)	Corporate tax	100
(v)	Compensation of employees	900
(vi)	Current transfers by government	150
(vii)	Interest	400
(viii)	Undistributed profits	50
(ix)	Dividend	250
(x)	Net factor income to abroad	(–) 10
(xi)	Income accruing to government	120

(Delhi 2016)

43. Find net national product at market price and personal disposable income:

		(₹ in Crore)
(i)	Personal taxes	200
(ii)	Wages and salaries	1200
(iii)	Undistributed profits	50
(iv)	Rent	300
(v)	Corporation tax	200
(vi)	Private income	2000
(vii)	Interest	400

(viii)	Net indirect tax	300
(ix)	Net factor income to abroad	20
(x)	Profit	500
(xi)	Social security contributions by employers	250

(Delhi 2016)

44. Find Gross National Product at Market Price and Private Income :

		(₹ in Crore)
(i)	Private final consumption expenditure	800
(ii)	Net current transfers to abroad	20
(iii)	Net factor income to abroad	(–) 10
(iv)	Government final consumption expenditure	300
(v)	Net indirect tax	150
(vi)	Net domestic capital formation	200
(vii)	Current transfers from government	40
(viii)	Depreciation	100
(ix)	Net imports	30
(x)	Income accruing to government	90
(xi)	National debt interest	50

(AI 2016)

45. Calculate Net National Product at Market Price and Private Income.

		(₹ in Crore)
(i)	Net current transfers to abroad	10
(ii)	Private final consumption expenditure	500
(iii)	Current transfers from government	30
(iv)	Net factor income to abroad	20
(v)	Net exports	(–) 20
(vi)	Net indirect tax	120
(vii)	National debt interest	70
(viii)	Net domestic capital formation	80
(ix)	Income accruing to government	60
(x)	Government final consumption expenditure	100

(AI 2016)

46. Calculate National Income and Personal Disposable Income :

		(₹ in Crore)
(i)	Corporation tax	100
(ii)	Private final consumption expenditure	900
(iii)	Personal income tax	120
(iv)	Government final consumption expenditure	200
(v)	Undistributed profits	50
(vi)	Change in stocks	(–) 20
(vii)	Net domestic fixed capital formation	120
(viii)	Net imports	10
(ix)	Net indirect tax	150
(x)	Net factor income from abroad	(–) 10
(xi)	Private income	1000

(AI 2016) Ap

47. Calculate National Income and Personal Disposable Income :

		(₹ in Crore)
(i)	Personal tax	80
(ii)	Private final consumption expenditure	600
(iii)	Undistributed profits	30
(iv)	Private income	650
(v)	Government final consumption expenditure	100
(vi)	Corporate tax	50
(vii)	Net domestic fixed capital formation	70
(viii)	Net indirect tax	60
(ix)	Depreciation	14
(x)	Change in stocks	(–) 10
(xi)	Net imports	20
(xii)	Net factor income to abroad	10

(Delhi 2015)

48. Calculate 'Gross National Product at Market Price' and 'Net National Disposable Income' :

		(₹ in Crore)
(i)	Rent	100
(ii)	Net current transfers to rest of the world	30
(iii)	Social security contributions by employers	47
(iv)	Mixed income	600
(v)	Gross domestic capital formation	140
(vi)	Royalty	20
(vii)	Interest	110
(viii)	Compensation of employees	500
(ix)	Net domestic capital formation	120
(x)	Net factor income from abroad	(–) 10
(xi)	Net indirect tax	150
(xii)	Profit	200

(Delhi 2015) Ap

49. Calculate 'Net domestic Product at Factor Cost' and 'Gross National Disposable Income':

		(₹ in Crore)
(i)	Net current transfers to abroad	15
(ii)	Private final consumption expenditure	800
(iii)	Net imports	(–) 20
(iv)	Net domestic capital formation	100
(v)	Net factor income to abroad	10
(vi)	Depreciation	50
(vii)	Change in stocks	17
(viii)	Net indirect tax	120
(ix)	Government final consumption expenditure	200
(x)	Exports	30

(Delhi 2015)

50. Giving reasons, explain how should the following be treated in estimation of national income?
(i) Expenditure by a firm on payment of fees to a chartered accountant.
(ii) Payment of corporate tax by a firm.
(iii) Purchase of refrigerator by a firm for own use.

(Delhi 2015) U

51. Calculate (a) national income and (b) gross national disposable income.

		(₹ 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
(x)	Net current transfers to abroad	(–) 10

(Delhi 2015 C)

52. From the following data calculate (a) Gross national product at market price and (b) Net national disposable income:

		(₹ in Crore)
(i)	Dividends	300
(ii)	Compensation of employees	3000
(iii)	Rent	500
(iv)	Depreciation	200
(v)	Interest	800
(vi)	Net factor income to abroad	100
(vii)	Mixed income	5000
(viii)	Net indirect taxes	400
(ix)	Profit	1500
(x)	Net current transfers to abroad	(–) 50

(AI 2015 C) Ap

53. Calculate the 'National Income' and 'Private Income':

		(₹ in Crore)
(i)	Rent	200
(ii)	Net factor income to abroad	10
(iii)	National debt interest	15
(iv)	Wages and salaries	700
(v)	Current transfers from government	10
(vi)	Undistributed profits	20
(vii)	Corporation tax	30
(viii)	Interest	150
(ix)	Social security contributions by employers	100
(x)	Net domestic product accruing to government	250
(xi)	Net current transfers to rest of the world	5
(xii)	Dividends	50

(AI 2015)

54. Calculate the 'Net National Product at Market Price' and 'Personal Income':

		(₹ in Crore)
(i)	Transfer payment by government	7
(ii)	Government final consumption expenditure	50
(iii)	Net imports	(–) 10
(iv)	Net domestic fixed capital formation	60
(v)	Private final consumption expenditure	300
(vi)	Private income	280
(vii)	Net factor income to abroad	(–) 5
(viii)	Closing stock	8
(ix)	Opening stock	8
(x)	Depreciation	12
(xi)	Corporate tax	60
(xii)	Retained earning of corporations	20

(AI 2015)

55. Calculate 'Net Domestic Product at Market Price' and 'Gross National Disposable Income':

		(₹ 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 current transfers to rest of the world	5
(vii)	Gross domestic fixed capital formation	80
(viii)	Closing stock	20
(ix)	Exports	10
(x)	Net factor income to abroad	(–) 15

(AI 2015)

56. Calculate 'Net National Product' at factor cost and 'Private Income' from the following:

		(₹ in Crore)
(i)	National debt interest	60
(ii)	Wages and salaries	600
(iii)	Net current transfers to abroad	20
(iv)	Rent	200
(v)	Transfer payments by government	70
(vi)	Interest	300
(vii)	Net domestic product at factor cost accuring to government	400
(viii)	Social security contributions by employers	100
(ix)	Net factor income paid to abroad	50
(x)	Profits	300

(Delhi 2014)

57. From the following data calculate personal disposable income:

		(₹ in Crore)
(i)	Net domestic product at factor cost accruing to private sector	800
(ii)	National debt interest	50
(iii)	Current transfers from government	70
(iv)	Savings of private corporate sector	200
(v)	Corporation tax	40
(vi)	Direct taxes paid by households	30

(vii)	Depreciation	60
(viii)	Net factor income from abroad	20
(ix)	Net current transfers to abroad	(–) 10

(Delhi 2014 C)

58. Calculate National Income and Gross National Disposable Income from the following :

		(₹ in Arab)
(i)	Net current transfers to abroad	(–) 15
(ii)	Private final consumption expenditure	600
(iii)	Subsidies	20
(iv)	Government final consumption expenditure	100
(v)	Indirect tax	120
(vi)	Net imports	20
(vii)	Consumption of fixed capital	35
(viii)	Net change in stocks	(–) 10
(ix)	Net factor income to abroad	5
(x)	Net domestic capital formation	110

(Delhi 2014)

59. Calculate Net Domestic Product at factor cost and net national disposable income from the following:

		(₹ in Arab)
(i)	Net current transfers to abroad	5
(ii)	Government final consumption expenditure	100
(iii)	Net indirect tax	80
(iv)	Private final consumption expenditure	300
(v)	Consumption of fixed capital	20
(vi)	Gross domestic fixed capital formation	50
(vii)	Net imports	(–) 10
(viii)	Closing stock	25
(ix)	Opening stock	25
(x)	Net factor income to abroad	10

(Delhi 2014)

60. Calculate "Personal Disposable Income" :

		(₹ in Lacs)
(i)	Net domestic product at factor cost accruing to private sector	700
(ii)	Corporation tax	40
(iii)	Net factor income from abroad	(–) 20
(iv)	Depreciation	50
(v)	Savings of private corporate sector	150
(vi)	Current transfers from government	80
(vii)	National debt interest	60
(viii)	Direct taxes paid by households	70
(ix)	Net current transfers to abroad	(–) 10

(Delhi 2014 C) Ap

61. Calculate National Income :

		(₹ in Crore)
(i)	Net domestic capital formation	150
(ii)	Government final consumption expenditure	300
(iii)	Net factor income from abroad	(–) 20
(iv)	Private final consumption expenditure	600
(v)	Depreciation	30
(vi)	Net exports	50
(vii)	Net indirect taxes	90
(viii)	Net current transfers from rest of the world	40

(Delhi 2014 C)

62. How should the following be treated in estimating national income of a country? You must give reason for your answer
(i) Take care of aged parents
(ii) Payment of corporate tax
(iii) Expenditure on providing police services by the government. *(AI 2014)* U

63. Calculate 'National Income' and 'Net National Disposable Income' from the following :

		(₹ in Arab)
(i)	Net change in stocks	50
(ii)	Government final consumption expenditure	100
(iii)	Net current transfers to abroad	30
(iv)	Gross domestic fixed capital formation	200
(v)	Private final consumption expenditure	500
(vi)	Net imports	40
(vii)	Depreciation	70
(viii)	Net factor income to abroad	(–) 10
(ix)	Net indirect tax	120
(x)	Net capital transfers to abroad	25

(AI 2014)

64. Calculate 'Net National Product at Market Price' and 'Gross National Disposable Income' from the following :

		(₹ in Arab)
(i)	Closing stocks	10
(ii)	Consumption of fixed capital	40
(iii)	Private final consumption expenditure	600
(iv)	Exports	50
(v)	Opening stock	20
(vi)	Government final consumption expenditure	100
(vii)	Imports	60
(viii)	Net domestic fixed capital formation	80
(ix)	Net current transfers to abroad	(–) 10
(x)	Net factor income to abroad	30

(AI 2014)

65. Calculate 'Net National Product at Factor Cost' and 'Gross National Disposable Income' from the following :

		(₹ in Arab)
(i)	Social security contributions by employers	90
(ii)	Wages and Salaries	800
(iii)	Net current transfers to abroad	(–) 30
(iv)	Rent and royalty	300
(v)	Net factor income to abroad	50

(vi) Social security contributions by employers 100
(vii) Profit 500
(viii) Interest 400
(ix) Consumption of fixed capital 200
(x) Net indirect tax 250
(AI 2014)

2.3 Aggregates Related to National Income

MCQ

66. National income is the sum of factor income accruing to :
(a) Nationals
(b) Economic territory
(c) Residents
(d) Both residents and non-residents. *(AI 2016)*

VSA (1/2 mark)

67. Distinguish between Factor Income and Transfer Income. *(Term-II, 2021-22)*

68. Distinguish between Domestic Income and National Income. *(Term-II, 2021-22)*

69. Define Real Gross Domestic Product. *(Term-II, 2021-22 C)*

70. Discuss briefly the three components of Income from Property and Entrepreneurship'. *(2020)* R

71. Define domestic product. *(AI 2014 C)*

SA I (3 marks)

72. Suppose the Gross Domestic Product (GDP) at market price of a country in a particular year was ₹ 1,500 crore. Ne Factor Income from Abroad was ₹ 100 crore. The value of Net Indirect Taxes was ₹ 180 crore and the National Income was ₹ 1,050 crore. Calculate the value of depreciation for the economy. *(2023)*

73. Suppose only one good *X* is produced in the country. Output of good *X* during 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. *(2023)* Ap

74. 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. *(2023)*

75. Calculate the value of Domestic Income from the following data:

S. No.	Particulars	Amount in (₹ crores)
(i)	Rent and Royalties	1,300
(ii)	Net Indirect Taxes	200
(iii)	Wages and Salaries (in cash and in kind)	1,700
(iv)	Corporate Tax	400
(v)	Depreciation	400
(vi)	Retained Earnings	300
(vii)	Dividents	400
(viii)	Net Factor Income from Abroad	(–) 120
(ix)	Mixed Income of Self Employed	1,400
(x)	Change in Stock	(–) 200

(2023)

76. From the following data, calculate the value of compensation of employees (COE):

S.No.	Items	Amount in (₹ Crore)
(i)	Old age pension	2,000
(ii)	Wages and Salaries in cash	60,000
(iii)	Rent free accommodation to employees	30,000
(iv)	Employer's contribution to provident fund	7,500
(v)	Payment of life insurance premium by the employees	2,500
(vi)	Contribution to provident fund by employees	35,000

(2023)

77. "Increase in domestic income always leads to an increase in national income." Do you agree with the given statement? Support your answer with a valid example. *(2021 C)*

78. Assuming real income to be ₹ 200 Crore and price index to be 135, calculate nominal income. *(AI 2016)*

79. If nominal income is ₹ 500 and price index is 125, calculate real income. *(AI 2016)*

80. If real income is ₹ 400 and price index is 105, calculate nominal income. *(AI 2016)* U

81. If real GDP is ₹ 200 and price index (with base = 100) is 110, calculate nominal GDP. *(Delhi 2015)*

82. If the nominal GDP is ₹ 1200 and price index (with base = 100) is 120, calculate real GDP. *(Delhi 2015)*

83. If the real GDP is ₹ 300 and nominal GDP is ₹ 330, calculate price index (base = 100). *(Delhi 2015)*

84. If the real GDP is ₹ 400 and nominal GDP is ₹ 450, calculate the price index (base = 100). *(AI 2015)* Ap

85. If the real GDP is ₹500 and price index (base = 100) is 125, calculate the nominal GDP. *(AI 2015)*

86. If the nominal GDP is ₹ 600 and price index (base = 100) is 120, calculate the real GDP. *(AI 2015)*

SA II (4 marks)

87. From the following data, calculate the value of operating surplus:

S.No.	Items	Amount in (₹ Crore)
(i)	Royalty	5
(ii)	Rent	75
(iii)	Interest	30
(iv)	Net domestic product at factor cost	400
(v)	Profit	45
(vi)	Dividends	20

(Term-II, 2021-22)

LA (5/6 marks)

88. How will you treat the following while estimating domestic product of a country? Give reasons for your answer :
(a) Profits earned by branches of country's bank in other countries.
(b) Gifts given by an employer to his employees on independence day.
(c) Purchase of goods by foreign tourists.
(Delhi 2017) An

89. Giving reason explain how the following should be treated in estimation of national income :
(i) Payment of interest by a firm to bank.
(ii) Payment of interest by a bank to an individual.
(iii) Payment of interest by an individual to a bank.
(AI 2015)

90. Giving reason explain how should the following be treated in estimating gross domestic product at market price ?
(i) Fees to a mechanic paid by a firm.
(ii) Interest paid by an individual on a car loan taken from a bank.
(iii) Expenditure on purchasing a car for use by a firm. *(Delhi 2014)*

91. Calculate national income :

	(₹ in Crore)
(i) Net current transfers 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

(AI 2014 C)

2.4 GDP and Welfare

SA I (3 marks)

92. "Gross Domestic Product (GDP) as in indicator of welfare loses its significance if the distribution of income turns unequal".
Justify the given statement with valid reason.
(Term-II, 2021-22)

93. What are 'externalities'? State its types with suitable examples. *(2020)* R

94. "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. *(2019)*

SA II (4 marks)

95. Government incurs expenditure to popularise yoga among the masses. Analyse its impact on Gross Domestic Product and welfare of the people.
(Delhi 2016)

96. Sale of petrol and diesel cars is rising particularly in big cities. Analyse its impact on Gross Domestic Product and welfare. *(AI 2016)*

LA (5/6 marks)

97. Explain 'non-monetary exchanges' as a limitation of using gross domestic product as an index of welfare of a country. *(Delhi 2017)* U

CBSE Sample Questions

2.1 Some Basic Concepts of Macroeconomics

MCQ

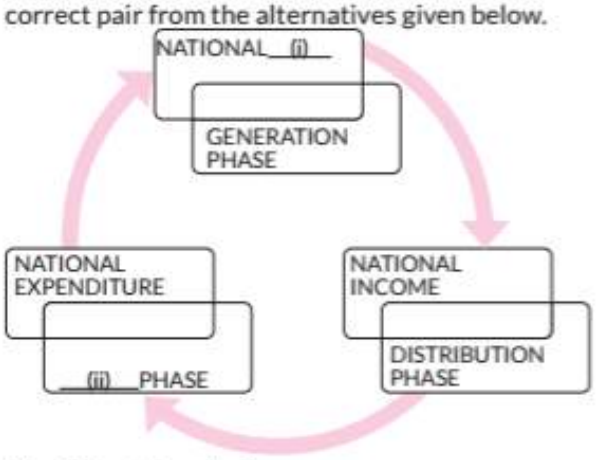
1. Read the following statements carefully.
Statement I : Net investment is a stock concept.
Statement II : Capital is a flow concept.
In the light of the given statements, choose the correct alternative from the following.
(a) Statement I is true but statement II is false.
(b) Statement I is false but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

2. Inventory is a _____ concept, whereas the change in inventory is a _____ concept.
(a) stock, flow (b) flow, stock
(c) stock, stock (d) flow, flow
(2020-21) R

2.2 Circular Flow of Income and Methods of Calculating National Income

MCQ

3. Read the following figure carefully and choose the correct pair from the alternatives given below.



(a) Output, Production
(b) Value added, Production
(c) Output, Disposition
(d) Wealth, Development (2022-23)

VSA (2 marks)

4. Distinguish between 'Value of Output' and 'Value Added'. (Term-II, 2021-22) An

SA I (3 marks)

5. Giving valid reasons explain which of the following will not be included in estimation of National Income of India?
(a) Purchase of shares of X. Ltd. by an investor in the National Stock Exchange.
(b) Salaries paid by the French Embassy, New Delhi to the local workers of the housekeeping department.
(c) Compensation paid by the Government of India to the victims of floods. (Term-II, 2021-22)

6. From the following data calculate the value of Domestic Income :

S.No.	Items	Amount 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

(Term-II, 2021-22) Ap

7. Given the following data, find Net Value Added at Factor Cost by Sambhav (a farmer) producing Wheat:

S.No.	Items	Amount in (₹ Crore)
(i)	Sale of wheat by the farmer in the local market	6,800
(ii)	Purchase of Tractor	5,000
(iii)	Procurement of wheat by the Govt. from the farmer	200
(iv)	Consumption of wheat by the farming family during the year	50
(v)	Expenditure on the maintenance of existing capital stock	100
(vi)	Subsidy	20

(Term-II, 2021-22)

8. State with valid reason, for the following statement is true or false:
"Gross Value Added at market price and Gross Domestic Product at market price are one and the same thing." (2020-21)

2.3 Aggregates Related to National Income

VSA (2 marks)

9. State any two components of 'Net Factor Income from Abroad'. (Term-II, 2021-22)

SA I (3 marks)

10. Suppose in a hypothetical economy there are only two Firms A and B, Firm 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.
Define Gross Domestic Product (GDP) deflator and discuss its importance. (2023)

11. Estimate the value of National 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.
(Term-II, 2021-22)

2.4 GDP and Welfare

VSA (2 marks)

12. Distinguish between positive and negative externalities. *(Term-II, 2021-22)* An

SA I (3 marks)

13. Explain how 'Non-Monetary Exchanges' impact the use of Gross Domestic Product as an index of economic welfare. *(Term-II, 2021-22)* U

14. 'Domestic/household services performed by a woman may not be considered as an economic activity'.
Defend or refute the given statement with valid reason. *(2020-21)*

15. 'Compensation of the victims of a cyclone is an example of a welfare measure taken by the government'
State with valid reason, should it be included/not included in the estimation of national income of India. *(2020-21)*

Detailed SOLUTIONS

Previous Years' CBSE Board Questions

1. (c)
2. (a) : Capital
3. (a)
4. Fixed investment refers to expenditure made to increase in the stock of fixed assets of the producers during an accounting year.
Example : Stock of fixed assets with the producers at the end of the accounting years.
Inventory Investment is expenditure made in addition to the stock of inventory with the producers during an accounting year.
Example : Inventory stock at the end of accounting year – Inventory stock at the beginning of the accounting year.
5.

	Stock		Flow
(i)	Quality of an economic variable which is measured at a particular point of time.	(i)	Quality of an economic variable which is measured during a period of time.
(ii)	It is a static concept.	(ii)	It is a dynamic concept.

6. True

Commonly Made Mistake

- Students must not take depreciation on account of unexpected or sudden destruction or disuse of capital as that can happen with incidents, natural calamities or other such extraneous circumstances.

7. Stock : A stock is a quantity measurable at a particular point of time, *e.g.*, 1st April, 2009, 10 a.m. etc. It has no time dimension. Examples of stock : population, wealth, water in a tank.

8. Flow : A flow is a quantity measurable over a specified period of time, *e.g.*, months, weeks, hours, etc. It has time dimension. Examples of flow : birth rate, income of a person, expenditure, depreciation.

9. Consumption goods are the goods which are consumed by the ultimate consumers to satisfy their wants directly, *e.g.*, T.V., shirt, pen, shoes etc. They can be classified into durable and non-durable goods.

10. Raw materials and fuels.

11. Investment : It refers to the net availability of new capital after taking into account the wear and tear of the existing capital.

12. Depreciation (or consumption of fixed capital) refers to the loss of value of fixed assets due to its normal wear and tear.

13. Change in stock = (*ii*) + (*vi*) + (*v*) - (*iii*) - (*i*)
= 200 + 100 + 40 – 10 – 400
= (–) ₹70 Crore

14. The given statement is refuted as final goods include those goods which are either consumed by the households or purchased by a producer for investment purposes.

15. Interest Received and Investment made

16. Capital goods are the goods which help in the production of other goods and services, *e.g.*; plant, machinery, tools, etc. Capital goods are different from consumer goods in a sense that consumer goods are consumed by the ultimate consumers to satisfy their wants directly, e.g; T.V., Shirt, Pen, Shoes, etc. However, capital goods help in the production of consumer goods.

17. The main differences between stocks and flows are given as :
(i) Stock is related to a point of time whereas flow is related to a period of time.
(ii) A stock is a static concept whereas a flow is a dynamic concept.
(iii) Stock has no time dimensions whereas flow has time dimensions.
for *e.g.*, : (a) National capital is a stock variable whereas national income is a flow variable.
(b) Net investment is a flow whereas capital is a stock.
(c) Amount of water in a tank at a particular point of time (here capital) is a stock concept, whereas amount of water flowing into it (here net investment) is a flow concept.

18.

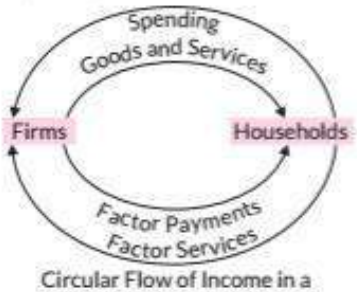
	Final goods	Intermediate goods
(i)	These goods are not used as raw material for the production of other goods during the accounting year.	These goods may be used as raw material for the production of other goods during the accounting year.
(ii)	These goods are not resold by the firms for profit during the accounting year.	These goods may be resold by the firms for profit during the accounting year.
(iii)	For example: Bread and butter.	For example: Raw material purchased by firm.

19. (c) : Factor, Consumption

20. (d) : Compensation of employees

21. Circular flow of income : Circular flow of income refers to the circular movement of money and goods in an economy. It may be of two types : (i) Real flow and (ii) Money flow. Real flow of income includes all the factor services of the households which it render to the firms and the movement of goods and services from the firm to the household to satisfy the demand whereas money flow of income includes all the payments done by the firms to the households for their factor services and the consumption expenditure done by the households to the firms for the purchase of goods and services in terms of money. Thus, flow of goods and services between firms and households is real flow and flow of money between the firms and households is money flow.

The circular flow of income in a two sector economy (or simple economy) is represented in the following way :



Circular Flow of Income in a Simple Economy

Commonly Made Mistake

➲ While explaining circular flow of income, students may get confused and draw improper direction of flows.

22. No, I do not agree with the statement given here. 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. For example- This is why exports are added as they are expenditures on domestically produced goods, while imports are subtracted because money is spent on goods produced in foreign countries.

23. (i) Profits earned by foreign banks in India is a part of domestic product of India because, the companies are within the domestic territory of India.
(ii) No, it will not be included in national income estimation. Because it is a part of intermediate consumption expenditure.

24. GVA_{MP} = (ii) + (iii) + (iv) – (v)
= 200 + (– 10) + 10 – 120
= ₹ 80 lakh

25. (i) The goods are produced in domestic territory in India. Purchase by Japanese tourist is an export for India. Therefore, included in domestic income.
(ii) Sale of second hand car is a productive service. That is why it will include in domestic income.

26. In a two sector economy, households and firms exist to run the economy. Households render factor services to the firms and earn factor incomes from them. Whereas; firms produce and sell, goods and services to households and earn their income by an equal magnitude. Thus, in a circular income mode, the axiom that one's expenditure is other's income holds true.

27. The problem of double counting arises when the value of some goods and services are counted more than once while estimating national income.
Two ways to avoid double counting are:
(i) By considering only the value added by each production unit.
(ii) By considering only the final goods and services in the estimation of the national income.

28. NVA_{FC} = (*iii*) + (*iv*) – (*ii*) – (v) – ((*i*)/10)

$$= 20 + 2 - 5 - 1 - \left(\frac{10}{10}\right)$$

= ₹ 22 – 7
= ₹ 15 Lacs

29. NVA_{MP} = (*iii*) + (*iv*) – (*ii*) – $\left(\frac{(i)}{5}\right)$
= Sales + Net change in stock – Raw material – Depreciation
= 25 – 2 – 6 – 3 = ₹ 14 Lacs

30. GVA_{MP} = (*ii*) + (*iv*) + (*iii*) – (v)
= 200 + 10 – 10 – 120
= 210 – 130 = ₹ 80 Lacs.

31. Following are some of the main precautions which must be taken while estimating national income by income method :
(i) Only factor incomes are included, but transfer incomes are not included. Gifts, donations, charities, old-age pensions are not factor incomes but transfer incomes. These should not be included in estimating national income.
(ii) The imputed rent of owners, self occupied house and value of production for self consumption are included.
(iii) Windfall gains such as prizes won, lotteries and illegal incomes such as *hawala* money, money earned through smuggling should not be included in estimating national income.

(iv) Wealth tax, taxes on capital gains are not included in national income.
(v) Direct taxes like income tax etc. should be included.
(vi) The interest on loans taken to meet consumption expenditure is a non-factor income and is not included in national income.

32. Value of output = Sales + Change in stock
= 300 + 20 = ₹ 320 Lacs
GNA_{MP} = Value of output – Intermediate consumption
= 320 – 120 = ₹ 200 lacs.
NVA_{FC} = GNA_{MP} – Depreciation – Net In direct Taxes
= 200 – 30 – 15 = ₹ 155 Lacs.

33. Under expenditure method, national income is measured at a stage when the final expenditure is incurred by various economic units of the economy. The main steps involved in this method are :
(i) Identification of economic units incurring final expenditure, *e.g.*, household or consuming sector, firm or purchasing sector and government.
(ii) Classification of final or aggregate expenditure such as (a) Private final consumption expenditure (b) Government purchases of goods and services (c) Gross investment (Gross business fixed investment + Inventory investment + Gross residential construction investment + Gross public investment) and (d) Net exports (Exports – Imports)
The sum total of all the above final expenditure on final product gives us GDP_{MP}.
(iii) Add net factor income from abroad to the GDP_{MP} to arrive at GNP_{MP}.
(iv) Deduct consumption of fixed capital (*i.e.*, depreciation) and net indirect taxes (*i.e.*, T – S) to get NNP_{FC} (or National Income).
NNP_{FC} (or NI) = GDP_{MP} – Depreciation = Net Indirect Taxes.

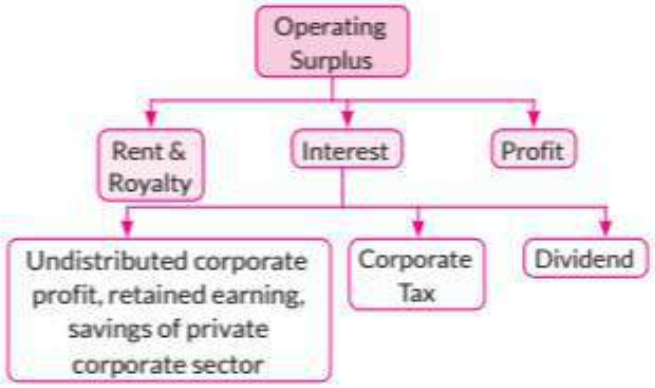
34. Value of output = Domestic Sales + Exports + Change in stock
= 3,000 + 500 – 100 = ₹ 3,400 Crore.
GVA_{FC} = Value of output – Intermediate consumption – indirect taxes
= 3,400 – 2,000 – 250 = ₹ 1150 Crore.

35. Net Value Added at FC
= (iv) + (ii) – (i) – (v) – (iii)
= 500 + 50 – 300 – 20 – 70 = ₹ 160 Lacs.

36. NVA_{FC} = (i) + (ii) – (iii) – (iv) – (vi)
= 400 + (–20) – 200 – 40 – 30
= 400 – 290 = ₹ 110 Lac.

37. (a) The problem of double counting is the problem of estimating the value of goods and services more than once. This is because while estimating national income by using final output method, the value of only final goods and services is taken into consideration. As far as an enterprise is concerned, its sales are treated as final sales or sales of final goods and service.
Measure to avoid double counting : According to this method, value of only final goods should be added to determine the national income.

(b) Operating Surplus : It refers to income from property and entrepreneurship.
(i) Rent, (ii) Interest, and (iii) Profit.



(c) Compensation of Employees: It includes the following components:
(i) Wages and Salaries in Cash: It refers to cash paid or transferred to the salary account of the employees by the employers as a reward for the work done during the period of an accounting year.
(iii) Payments in Kind: It refers to benefits in kind (like rent-free accommodation) given to the employees by the employers on behalf of the employees.
(iii) Employers' Contribution to Social Security: It refers to such payments as provident fund contributions by the employers on behalf of the employees.
(iv) Pension on Retirement: To be specific, it does not refer to old-age pension. It only refers to pension payments as a part of the 'Service-Contract' between the employer and the employees.

38. Mixed income of self-employed
= (i) – [(viii) + (xii) + (v)]
= 71,000 – (15,000 + 30,000 + 1,000)
Mixed income of self-employed = ₹ 25,000 Crore
Government Final consumption expenditure
= (i) – [(x) + (ii) + (v) + (ix)] + (vi) + (xi)
=71,000 – (40,000 + 10,000 + 1,000 + 5,000) + 2,000 + 3,000
= ₹ 20,000 Crore

39. (a) Operating surplus = Rent and interest + undistributed Profits + dividend
= 800 + 300 + 940
⇒ 2040
(b) NDP_{F_C} = COE + operating surplus + mixed increase
= 21000 + 2,040 + 200
⇒ 4240
GDP_{F_C} = NDP_{F_C} + depreciation
⇒ 4240 – 100 ⇒ 4140
GDP_{Mp} = GDP_{F_C} + NIT
= 4140 + 120 + 460 – 20 = 4700
Therefore domestic income is ₹4700.

40. (a) NDP_{FC} = Private Final Consumption Expenditure + Government final consumption expenditure + Gross domestic fixed capital formation + change in stock + Exports – Imports – Consumption of Fixed Capital – (Indirect Taxes – Subsidies)

= 8,000 + 1,000 + 500 + 100 + 70 – 120 – 60 – (700 – 50) = ₹ 8,840 Crore.

(b) Gross National Disposable income = NDP_{FC} + Net Indirect Taxes – Net current transfers to abroad + Factor income from abroad – Factor income to abroad + Current replacement Cost (Depreciation/Consumption of Fixed Capital)

= 8,840 + (700 – 50) – (–30) + 90 – 40 + 60 = ₹ 9,630 Crore.

41. NDP_{FC} = (i) + (iv) + (vi) + (ix) + (x) + (xi)
= 1,000 + 400 + 100 + 200 + 300 + 50 = ₹ 2050
NNP_{FC} = 2050 – 10 = 2040
Pvt. Income = NNP_{FC} – (viii) – (ii) + (v) + (vii)
= 2040 – 150 – 20 + 120 + 60 = ₹ 2050 Crore

42. NDP_{FC} = (i) + (iv) + (v) + (vii) + (viii) + (ix)
= 200 + 100 + 900 + 400 + 50 + 250 = ₹ 1,900 Crore
Pvt. Income = NDP_{FC} – (xi) – (ii) + (iii) + (vi) + (x)
= 1,900 – 120 – 10 + 60 + 150 – (–10) = ₹ 1,990 Crore
Personal income = Pvt. Income – (iv) – (viii)
= 1,990 – 100 – 50 = ₹ 1,840 Crore

43. NNP_{MP} = (ii) + (iv) + (vii) + (viii) – (ix) + (x) + (xi)
= 1,200 + 300 + 400 + 300 – 20 + 500 + 250 = ₹ 2,930 Crore.
Personal Disposable Income
= (vi) – (iii) – (v) – (i)
= 2,000 – 50 – 200 – 200 = ₹ 1,550 Crore

Concept Applied

- During the estimation of National Income following items will not be included:
  (i) Corporate Profit Tax
  (ii) Gifts from abroad
  (iii) Employee's contribution in social security.

44. GNP_{MP} = (i) + (iv) + (vi) + (viii) – (ix) – (iii)
= 800 + 300 + 200 + 100 – 30 – (–10) = ₹ 1,380 Crore
GDP_{MP} = GNP_{MP} + (iii)
= 1380 + (–10) = ₹ 1,340 Crore
Pvt. Income = GDP_{MP} – (v) – (viii) – (x) – (iii) + (vii) – (ii) + (xi)
Pvt. Income = 1370 – 150 – 100 – 90 – (–10) + 40 – 20 + 50
= ₹ 1,110 Crore

45. NDP_{MP} = (ii) + (v) + (viii) + (x)
= 500 + (–20) + 80 + 100 = ₹ 660 Crore.
NNP_{MP} = NDP_{MP} + NFIA
= 660 – 20 = ₹ 640 Crore
Personal income
= NNP_{MP} – (i) + (iii) – (vi) + (vii) – (ix)
= 640 – 10 + 30 – 120 + 70 – 60 = ₹ 550 Crore.

46. NDP_{MP} = (ii) + (iv) + (vii) + (vi) – (viii)
= 900 + 200 + 120 + (–20) – 10 = ₹ 1,190 Crore.
NNP_{FC} = NDP_{MP} + NFIA – NIT
= 1,190 + (x) – (ix)
= 1,190 + (–10) – 150 = 1,190 – 10 – 150 = ₹ 1,030 Crore
Personal disposable income
= (xi) – (i) – (v) – (iii)
= 1,000 – 100 – 50 – 120 = 1,000 – 270 = ₹ 730 Crore

47. National income
= (ii) + (v) + [(vii) + (x)] – (xi) – (viii) – (xii)
= 600 + 100 + 70 + (–10) – 20 – 60 – 10 = ₹ 670 Crore
Personal disposable income
= (iv) – (vi) – (iii) – (i)
= 650 – 50 – 30 – 80 = ₹ 490 Crore

48. Depreciation = (v) – (ix)
= 140 – 120 = ₹ 20
NDP_{FC} = (viii) + (i) + (vii) + (vi) + (xii) + (iv)
= 500 + 100 + 110 + 20 + 200 + 600 = ₹ 1,530 Crore
GNP_{MP} = NDP_{FC} + Depreciation + Net indirect tax + Net factor income from abroad
= 1530 + 20 + 150 + (–10)
= ₹ 1,690 Crore
NNDI = GNP_{MP} – Depreciation – Net current transfers to the rest of the world
= 1690 – 20 – 30 = ₹ 1,640 Crore

49. NDP_{FC} = (ii) – (iii) + (iv) + (ix) – (viii)
= 800 – (–20) + 100 + 200 – 120
= ₹ 1,000 Crore
GNDI = 1,000 + (viii) – (v) – (i) + (vi)
= 1,000 + 120 – 10 – 15 + 50 = ₹ 1,145 Crore

50. (i) Payment of fees to Chartered Accountant by a firm is intermediate cost to the firm and therefore, it is not included and not considered while calculating National Income.
(ii) Payment of corporate tax by a firm is a transfer payment and thus, not included. Because transfer payments are not a part of national income.
(iii) Purchase of a refrigerator by a firm for own use is investment expenditure and thus, included. Firm is purchasing refrigerator for production purpose so that is the reason this transaction will be included in estimation of national income.

51. (a) NNP_{FC} = (i) + (viii) + (ii + iv + ix) + (v) + (iii) – (ix) – (vi)
= 500 + 200 + (100 + 20 + 60 + 40 + 30 – 60 – 50)
= 890 – 50 = ₹ 840 Crore.
(b) Gross National Disposable Income
= NNP_{FC} + (x) + (iii) + (ix) + (vi)
= 840 + (–10) + 30 + 60 + 50
= 840 – 10 + 30 + 60 + 50
= ₹ 970 Crore.

52. (a) GNP_{FC} = Compensation of employees + Rent + Interest + Mixed Income + Profit + Net indirect taxes + Depreciation – net factor income to abroad
= 3,000 + 500 + 800 + 5,000 + 1,500
= ₹ 10,800 Crore.
GNP_{MP} = 3,000 + 500 + 800 + 5000 + 1500 + 400 + 200 – 100
= ₹ 11,300 Crore.
(b) Net national disposable in come (NNDI)
GNP_{MP} = Net current transfer to abroad – Depreciation
= 11,300 – 50 – 200 = ₹ 11,150 Crore.

53. National income = Wages and salaries + Social security contributions by employers + Rent + Interest + Dividends + Corporation tax + Undistributed profits + Net factor income to abroad
= (iv) + (ix) + (i) + (xii) + (vii) + (ii)
= 700 + 100 + 200 + 150 + 50 + 30 + 10
= ₹ 1,240 Crore

Pvt. Income = National Income – Net domestic product accruing to government + Current transfer from government – Net current transfers to the rest of the world + National debt interest
= 1,240 – 250 + 10 – 5 + 15 = ₹ 1,010 Crore

54. NNP_{MP} = Private final consumption expenditure + Government final consumption expenditure + (Net domestic fixed capital formation + Depreciation) + Change in stock – Net imports – Depreciation – Net factor income to abroad
= 300 + 50 + 60 + 12 + (8 – 8) – (–10) – 12 – (–5)
= ₹ 425 Crore
Personal income = Private income – Corporate tax – Retained earning of corporations
= 280 – 60 – 20 = ₹ 200 Crore

55. (i) NDP_{MP} = Private final consumption expenditure + Government final consumption expenditure + Gross domestic fixed capital formation + Change in stock + Net exports – Depreciation
= 400 + 90 + 80 + (20 – 10) + (10 – 15) – 25
= ₹ 550 Crore
(ii) GNDI = Net domestic product at market prices – Net factor income to abroad + Consumption of fixed capital – Net current transfer to rest of the world
= 550 – (–5) + 25 – 5 = ₹ 575 Crore

56. NNP_{FC} = Wages and salaries + Employers contribution to social security + Rent + Interest + Profit – Net factor income to abroad,
= 600 + 100 + 200 + 300 + 300 – 50 = ₹ 1,450 Arab
PI = NNP_{FC} – (–Net factor income to abroad) – Income from NDP accruing to govt. – Net factor income to abroad + Net current transfers from govt. – Net transfers to abroad + Interest on National debt,
Personal income = 1,450 + 50 – 400 – 50 + 70 – 20 + 60
= ₹ 1,160 Arab

57. Personal disposable income
= (i) + (ii) + (viii) – (ix) + (iii) – (iv) – (v) – (vi)
= 800 + 50 + 20 – (–10) + 70 – 200 – 40 – 30
= 950 – 270 = ₹ 680 Crore

Related Theory

- Personal disposable income helps economists to measure the savings and spending rates of the household. As an important indicator, it is used in determining demand in an economy.

58. National Income
= (ii) + (iv) + (x) + (vii) – (vi) – [v – iii] – (viii) – (ix)
= 600 + 100 + 110 + 35 – 20 – [120 – 20] – 35 – 5
= 830 – 145 = ₹ 685 Arab.
Gross National Disposable Income
= NNP_{FC} + [v – iii] + (vii) – (i)
= 685 + (120 – 20) + 35 –(–15) = 685 + 100 + 35 + 15
= ₹ 835 Arab.

59. National Domestic Income at factor cost
NDP_{FC} = (ii) + (iv) + (vi) + [(viii) – (ix)] – (vii) – (v) – (iii)
= 100 + 300 + 50 + [25 – 25] – (–10) – 20 – 80
= 460 – 100 = ₹ 360 Arab.
Net National Disposable Income
= NDP_{FC} – Net factor income to abroad + Net Indirect Tax + Net Current Transfers to abroad.
= NDP_{FC} – (x) + (iii) + (i)
= 360 – 10 + 80 – 5 = 440 – 15 = ₹ 425 Arab.

60. Personal Disposable Income
= (i) + (iii) + (vi) + (vii) – (ix) – (ii) – (v) – (viii)
= 700 + (–20) + 80 + 60 – (–10) – 40 – 150 – 70
= ₹ 570 Lac.

61. National Income
= (iv) + (ii) + (i) + (vi) + (iii – vii)
= 600 + 300 + 150 + 50 + (–20) – 90
= ₹ 990 Crore.

62. (i) Taking care of aged parents : This will not be included in National Income as it does not involve any production of goods and services. Moreover, these services that are meant for self consumption and it is difficult to estimate the market value of such services.
(ii) Payment of Corporate Tax : Corporate tax is a part of corporate profit and therefore, it is included in National Income of the country.
(iii) Expenditure on providing police services by the government : It is included in National Income of a country as it forms a part of Government Final Consumption Expenditure.

63. NNP_{FC} = Private Final Consumption Expenditure + Government final consumption expenditure + Gross domestic fixed capital formation + Net change in stocks – Net imports – Depreciation – Net indirect tax – Net factor income to abroad
= 500 + 100 + 200 + 50 – 40 – 70 – 120 –(–10)
= ₹ 630 Arab.
Net National Disposable Income
= NNP_{FC} + (ix) – (iii)
= 630 + 120 – 30 = 750 – 30 = ₹ 720 Arab.

64. NNP_{MP} = Private Final Consumption Expenditure + Government final consumption expenditure + (Net domestic fixed capital formation + Consumption of fixed capital) + (Closing Stock – Opening Stock) + (Exports – Imports) – Consumption of fixed capital – Net factor income to abroad
= 600 + 100 + 80 + 40 + (10 – 20) + (50 – 60) – 40 – 30
= ₹ 730 Arab.
Gross National Disposable Income = NNP_{MP} – Net current transfers to abroad + Consumption of fixed capital
= NNP_{MP} – (ix) + (ii)
= 730 – (–10) + 40 = ₹ 780 Arab.

65. NNP_{FC} = (ii) + (vi) + (iv) + (vii) + (viii) – (v)
= 800 + 100 + 300 + 500 + 400 – 50 = ₹ 2,050 in Arab.
Gross National Disposable Income
Gross National Disposable Income (GNDI)
= NNP_{FC} + NIT – Net current transfer to the test of the world + consumption of fixed capital
= 2050 + 250 – (–30) + 200 = ₹ 2530 Arab.

66. (c) : Residents

67. (i) Factor Income are related to factor services or factors of production (land, labour, capital, entrepreneurship). Factor incomes are the incomes earned by the various factors of production for their services in the production.
(ii) Transfer Income : Income received by individual without rendering any productive service in return is known as Transfer income.

68. Domestic Income : It is the sum total of factor incomes generated within the domestic territory of a country, no matters who generates it.
National Income : It is the sum total of all factors income earned by normal residents of a country in the form of wages. Both income from domestic territory as well as from abroad is considered.

69. Real Gross Domestic product is the sum total of the money value of all final goods and services produced in an economy during the year estimated at some given base year's prices.

70. Income from property in entrepreneurship (operating surplus) includes:
i. Rent/Royalties ii. Interest
iii. Profit

71. Domestic product is the total market value to all final goods and services produced by all production units, both residents and non-residents in the domestic territory during year.

72. Given, GDP_{MP} = ₹1500
NFIA = ₹100
NIT = ₹180
NNP_{FC} = ₹1050
GDP_{FC} = 1500 – 180 = ₹1320
$GNP_{FC} = GDP_{FC} + NFIA$
= 1320 + 100
= ₹1420
$NNP_{FC} + D = GNP_{FC}$
D = 1420 – 1050
Depreciation = ₹370 crore

73.

Year	Output	Market Price
2018	100	50
2019	110	55

Nominal GDP 2018 = 100 Units × 50 Per Unit = 5,000
Nominal GDP 2019 = 110 × 56 Per Unit = 6,160
Real GDP
2018 = 100 × 50 = 5000
2019 = 110 × 50 = 5500

$$\frac{\text{Real GDP 2019} - \text{2018}}{\text{Real GDP 2018}} \times 100$$

$$\frac{5500 - 5000}{5000} \times 100 = 10\,\%$$

Percentage change in Real Gross Domestic Product = 10%

74. Given, GDP_{MP} = 1100
NFIA = ₹100
NIT = ₹150
NNP_{FC} = ₹850
$GDP_{FC} = GDP_{MP} - NIT$
1100 – 150 = ₹950
GNP_{FC} = ₹950
$GNP_{FC} = GDP_{FC} + NFIA$
= 950 + 100 = ₹1050
NNP_{FC} + Depreciation = GNP_{FC}
Depreciation = 1050 – 850
= ₹200.

75. Operating Surplus
(i) + (iv) + (vi) + (vii)
(1300 + 400 + 300 + 400)₹
= ₹ 2400
Domestic Income = ₹2400 + (ii) + (ix)
= (2400 + 1700 + 1400)₹
= ₹ 5500 crore

76. (i) Compensation of employees (COE)
= Wages and Salaries on Cash + Rent free accommodation to employees + Employer's contribution to provident fund
= (ii) + (iii) + (iv)
= 60, 000 + 30, 000 + 7,500 = ₹ 97, 500 Crore.

77. No, it is not always necessary that an increase in domestic income leads to an increase in national income.
We know that,
National Income = Domestic Income + Net Factor Income from Abroad
The following data justifies the above-mentioned condition:

(All figures are in ₹ crores)

Items	2018-19	2019-20	Net Change
Domestic Income	160	200	Increase by ₹ 40 crores
Net Factor Income from Abroad	60	15	Decrease by ₹ 40 crores
Nation Income	220	215	Decrease by ₹ 5 crores

In the above example, in spite of the rise in the domestic income, the national income is falling by ₹ 5 crores.

78. Given, Real income = ₹ 200 Crore
Price index = 135, Nominal income = ?
Nominal income (Income of current year prices)

$$= \frac{\text{Real Income}}{\text{Base Price Year}} \times \text{Price index of current year}$$

$$\text{Nominal income} = \frac{200}{100} \times 135 = ₹\ 270 \text{ Crore}$$

79. Given, Nominal income = ₹ 500
Price index = 125

$$\text{Real income} = \frac{\text{Nominal Income}}{\text{Current Price Index}} \times 100$$

$$= \frac{500}{125} \times 100 = ₹\ 400 = ₹\ 400$$

80. Given, Real income = ₹ 400, Price index = 105
Nominal income

$$= \frac{\text{Real Income}}{\text{Base Year Price Index}} \times \text{Current Year Price Index}$$

$$= \frac{400}{100} \times 105 = ₹\,420$$

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

$$200 = \frac{\text{Nominal GDP}}{110} \times 100$$

$$\text{Nominal GDP} = \frac{200 \times 110}{100} = ₹\,220$$

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

$$= \frac{1{,}200}{120} \times 100 = ₹\,1{,}000$$

83. Real GDP = 300, Nominal GDP = 330

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

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

84. We know, Real GDP

$$= \frac{\text{Nominal GDP}}{\text{Price Index of Current Year}} \times 100$$

Substituting the given values in the formula :

$$400 = \frac{450}{\text{Price Index of Current Year}} \times 100$$

Or, Price index of Current Year = 112.5

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

Substituting the given values

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

Or, Nominal GDP = ₹ 625

86. We know, Nominal GDP = ₹ 600
Price Index = 120 : Real GDP = ?
Normal GDP = ₹ 600
Price Index = 120 : Real GDP = ?

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

Substituting the given values in the formula :

$$\text{Real GDP} = \frac{160}{120} \times 100$$

87. (i) Operating surplus = Rent + Royalty + Profit + Interest

= (75 + 5 + 45 + 30) ₹ Crore
= ₹ 155 Crore

Related Theory

- In an economy, only net investment leads to addition to the stock of capital. Depreciation is a part of gross investment only replaces the worn-out fixed assets. It helps to maintain the existing stock of capital.

88. (a) The profits earned by the branches of country's bank's will not be included in the domestic income of that country as the banks are located outside the domestic territory of the country.
(b) Gifts by the employer are included in the domestic income as they are a compensation paid in kind.
(c) Purchase of goods by foreigners are exports and thus they are part of the domestic income.

89. (i) Payment of interest by a firm to bank will be included in the national income. This is because the firm would have taken loan for productive purposes.
(ii) Payment of interest by a bank to an individual will be included in the national income. This is because the bank would have used the savings of the individual (on which the loan is paid) for productive purposes.
(iii) Payment of interest by an individual to a bank will not be included in the national income. This is because the individual is expected to have taken a loan for consumption purposes rather than for productive purposes.

90. (i) Fees paid to a mechanic by a firm will be included while estimating the gross domestic product at market price. This is because the fees is being paid in return for the services offered by the mechanic. This is because the fees is being paid in return for the services offered by the mechanic. Thus, as GDP_{MP} includes the market value of all the goods and services produced in a country, it will be included.
(ii) Interest paid by an individual on a car loan taken from a bank will be included while estimating the gross domestic product at a market price. This is because it is an income for the bank. Thus, it will be a part of GDP_{MP}.
(iii) Expenditure on purchasing a car for the use by a firm will be included while estimating the gross domestic product at market price. This is because the car is being purchased by the firm for its usage and not for other purpose.

91. NVA_{FC} = (ii) + (iii) + (vi) + (vii) – (viii) – (ix)
= 400 + 100 + 200 + 40 – 80 – 10
= 740 – 90 = ₹ 650 Crore.

92. GDP is a useful indicator of a nation's economic performance, and it is the most commonly used measure of well-being. However, it has some important limitations, including:
(i) The exclusion of non-market transactions
(ii) The failure to account for or represent the degree of income inequality in society
(iii) The failure to indicate whether the nation's rate of growth is sustainable or not
(iv) The failure to account for the costs imposed on human health and the environment of negative externalities arising from the production or consumption of the nation's output

93. Externalities refer to the benefits/harms caused by a firm/individual to the society in general, without being penalised.
There are two types of externalities:–
(i) Positive externalities – Social benefits. E.g. saving of time/fuel with construction of better roads in a country
(ii) Negative externalities – Social harms for example pollution caused by stubble burning in some states of India.

94. GDP(Gross domestic product) represents the market value of goods and services produced within domestic territory of a country in monetary terms.
It simply represents economic growth of country but does not represent the distribution of income and hence is not an indicator of economic welfare of a country.
(i) If GDP of a country is increasing it is still possible that the benefit of such growth remains confined to a limited group of people.
(ii) Economic welfare exist when Per capita income increases, literacy rate, living standard, health facility etc improves.
(iii) No doubt increase in GDP will lead to economic welfare , but it does not give a clear picture of economic welfare.

95. Incurring expenditure to popularise yoga among the masses, the government is trying to create health awareness. It is also trying to get people to adopt a healthy lifestyle. This, in the long run, will benefit both the society and economy. Adoption of healthy habits will raise the physical and emotional welfare of the people.
A healthy workforce will have a positive impact on the gross domestic product (GDP) of the country. Improvement in health and increase in fitness levels will lead to improved productivity and efficiency of workforce along with greater stamina to work and reduced absenteeism. This in turn will increase the GDP of the country. *i.e.*, higher availability of goods and services per person. This will further increase the welfare of masses.

96. There is a direct relation between the size of a country's gross domestic product (GDP) and its automotive industry. GDP accounts for the consumption, investment, government spending and net exports during a given period. More sale of petrol and diesel cars will contribute to increase GDP. High growth economics require better means of transportation and faster mobility which will lead to increased welfare. More vehicles are being made and sold. This will also attracts more investments.

97. Non-monetary exchange: GNP does not take into account those transactions that are not expressed in monetary terms. This is a major limitation of GDP as an index of welfare of a country as there are many transactions which although are non-monetary in terms and add to the growth and development of the nation.
For example, work done by a social worker or a homemaker. Here a homemaker adds to the welfare of the family by keeping them healthy, which in turn adds to the welfare of the country. However as such transactions are non-monetary in nature these are not included while calculating the domestic income. In less developed countries, there are various non-monetary exchanges particularly in the rural areas and household sector. Consequently, such transactions remain outside the domain of GNP leading to underestimation of the value of GNP. Thus GNP cannot be regarded as an index of economic welfare, as it ignores the household and the volunteer sectors.

CBSE Sample Questions

1. (d) : Both statements I and II are false. Net investment is a flow concept. Capital is a stock concept. **(1)**

2. (a) : stock, flow **(1)**

3. (c) : Output, Disposition. **(1)**

4. Value of output is the money value of all the goods and services produced by a firm at current prices. It can be estimated by multiplying quantity of output with its price. For example, if a cotton textile mill produces 100 meters of cloth and sells at ₹ 20 per meter, the value of its output will be ₹ 20000.
Value added refers to the additions made in the value of intermediate goods by a firm with the help of factors of production. For example, cotton textile mill purchases intermediate goods worth ₹ 1000, convert them to cloth, and sell the same for ₹ 1500. Thus, the firm has added the value of ₹ 1500–1000 = ₹ 500. **(1×2)**

5. Following will not be included in estimation of National Income of India :
(a) As such transactions are mere paper claims and do not lead to any value addition.
(c) 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. **(1.5×2)**

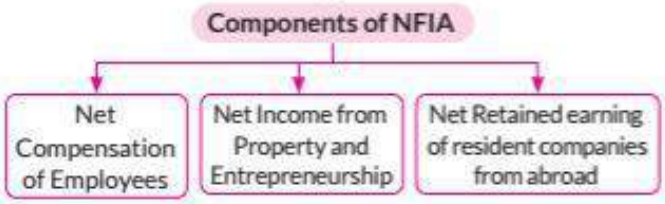
6. Domestic Income (NDP_{FC})
(i) + (ii) + (iv) + (vii) + (viii) + (x)
= ₹2000 + ₹800 + ₹460 + ₹940 + ₹300 + ₹200
= ₹4,700 Crore **(3)**

7. Net Value Added at Factor Cost (NVA @ FC)
= (i) + (iii) + (iv) + (vi) – (v)
= ₹6800 + ₹200 + ₹50 + ₹20 – ₹100 = ₹6,970 Crore. **(3)**

8. The given statement is false as Gross Domestic Product is the result of sum of Gross Value Added by all the producing units/ firms in an economy, during an accounting year. **(3)**

9. Net Factor Income from Abroad (NFIA): It is difference between factor income received/earned by

normal residents of a country and factor income paid to non-residents of the country.



(2)

10.

	Value of Output (in ₹)	Intermediate Consumption (in ₹)	Value Addition (in ₹)
A	2000 (to B)	1000 (Purchases)	1000
B	2500 (exports) 1500 (domestic sales)	2000	2000
Total	6000	3000	3000

Net Domestic Product at MP = Gross Domestic Product at market price – Consumption of Fixed Capital

= 3000 – 200 = ₹2800

GDP Deflator is the ratio of Nominal to Real GDP. It is a tool which is used to eliminate the effect of price fluctuations in the economy and to determine the real change in physical output of current year. GDP deflator helps in comparison of growth rate of the economy. (3)

11. Nominal GDP = Real GDP × $\frac{\text{Price Index}}{100}$

$= 500 \times \frac{125}{100} = 625$ crore (3)

12. Positive externalities : When activities of one result in benefits of the other without receiving and payment. Such benefits are called positive externalities. Example of positive Externalities:-construction of a flyover or a highway reduces transport costs and journey time of its users who have not contributed anything towards its cost.

Negative Externalities : When activities of one result in harm of the other without penalizing. Such harm are called positive externalities. Examples of Negative Externalities. Smoke emitted by factories causing air pollution. It results in health hazards thus reduces economic welfare. But factories does not pay to the public for risking their health.

(1 × 2)

13. 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.

This is a major limitation of GDP as an index of welfare of a country as there are many transactions which although are non-monetary but add to the growth and development of the nation

Many non-monetary activities in the economy done out of love and affection are not evaluated in monetary terms due to lack of authentic data.

For example: kitchen gardening, services of homemaker, etc. (3)

14. The given statement is defended; as it is difficult to measure the monetary value of the services performed by a woman (homemaker). Therefore, these activities may not be considered as an economic activity. (3)

15. Compensation given to the victims of a cyclone is an example of a social welfare measure taken by the government.

However, it is not included in estimation of national income as it is a transfer payment which does not lead to corresponding flow of goods and services. (3)