TYBA COACHING CENTRE, AJMER

CLASS 12 MACROECONOMICS: NATIONAL INCOME & RELATED AGGREGATES — COMPLETE QUESTION BANK & 10 YEARS BOARD NUMERICALS (2026–27)

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Section 1: Complete Formulas and Accounting Identities (Full Forms)

Fundamental Conversion Rules

1. Gross Value − Depreciation (Consumption of Fixed Capital) = Net Value
2. Domestic Product + Net Factor Income from Abroad = National Product
3. Market Price − Net Indirect Taxes = Factor Cost
4. Net Indirect Taxes = Indirect Taxes − Subsidies
5. Net Factor Income from Abroad = Factor Income Earned from Abroad − Factor Income Paid to Abroad
6. Change in Stock = Closing Stock − Opening Stock
7. Net Exports = Exports − Imports

Three Methods of Measuring National Income

Method 1: Value Added Method (Product Method)

• Value of Output = Sales + Change in Stock (Closing Stock − Opening Stock)

• Gross Value Added at Market Price = Value of Output − Intermediate Consumption

• Gross Domestic Product at Market Price (GDP) = Sum of Gross Value Added at Market Price of all producing sectors

• Net Value Added at Factor Cost = Gross Value Added at Market Price − Depreciation − Net Indirect Taxes

Method 2: Income Method

• Net Domestic Product at Factor Cost (NDP) = Compensation of Employees + Operating Surplus + Mixed Income of Self-Employed

• Compensation of Employees = Wages and Salaries in Cash + Wages and Salaries in Kind + Employers' Contribution to Social Security Schemes

• Operating Surplus = Rent + Royalty + Interest + Profit

• Profit = Corporate Tax + Dividend + Retained Earnings (Undistributed Profit)

• Net National Product at Factor Cost (National Income) = Net Domestic Product at Factor Cost (NDP) + Net Factor Income from Abroad

Method 3: Expenditure Method

• Gross Domestic Product at Market Price (GDP) = Private Final Consumption Expenditure + Government Final Consumption Expenditure + Gross Domestic Capital Formation + Net Exports

• Gross Domestic Capital Formation = Gross Domestic Fixed Capital Formation + Change in Stock (Closing Stock − Opening Stock)

• Gross Domestic Capital Formation = Net Domestic Capital Formation + Depreciation

• Net National Product at Factor Cost (National Income) = Gross Domestic Product at Market Price (GDP) − Depreciation + Net Factor Income from Abroad − Net Indirect Taxes

Real Income, Nominal Income, and Welfare Formulas

- Real Gross Domestic Product (GDP) = (Nominal Gross Domestic Product (GDP) / Price Index) × 100
- Nominal Gross Domestic Product (GDP) = (Real Gross Domestic Product (GDP) × Price Index) / 100
- Gross Domestic Product (GDP) Deflator = (Nominal Gross Domestic Product (GDP) / Real Gross Domestic Product (GDP)) × 100
- Per Capita Income = Net National Product at Factor Cost (National Income) / Total Population
- Personal Disposable Income = Personal Income − Direct Personal Taxes − Miscellaneous Receipts of the Government Administrative Departments

Section 2: Complete Set of 50 Practice Questions with Solutions and Reasons

Part A: Multiple Choice Questions (Questions 1 to 30)

Question 1. Which of the following aggregates is universally recognized as National Income?

(A) Net Domestic Product at Market Price (NDP)
(B) Gross Domestic Product at Market Price (GDP)
(C) Net National Product at Factor Cost
(D) Gross National Product at Factor Cost

Answer: (C) Net National Product at Factor Cost

Reason and Formula: Net National Product at Factor Cost represents the total factor income earned by normal residents of a country during an accounting year, free from depreciation and net indirect taxes.

Question 2. What is the exact accounting difference between Gross Domestic Product at Market Price (GDP) and Gross National Product at Market Price?

(A) Depreciation
(B) Net Indirect Taxes
(C) Net Factor Income from Abroad
(D) Subsidies

Answer: (C) Net Factor Income from Abroad

Reason and Formula: Formula: Gross National Product at Market Price = Gross Domestic Product at Market Price (GDP) + Net Factor Income from Abroad.

Question 3. Which adjustment is required to convert Market Price into Factor Cost?

(A) Subtract Depreciation
(B) Subtract Net Indirect Taxes (Indirect Taxes minus Subsidies)
(C) Add Net Factor Income from Abroad
(D) Subtract Transfer Payments

Answer: (B) Subtract Net Indirect Taxes (Indirect Taxes minus Subsidies)

Reason and Formula: Formula: Factor Cost = Market Price − Indirect Taxes + Subsidies = Market Price − Net Indirect Taxes.

Question 4. Which component is deducted to convert any Gross aggregate into a Net aggregate?

(A) Net Factor Income from Abroad
(B) Subsidies
(C) Depreciation (Consumption of Fixed Capital)
(D) Direct Taxes

Answer: (C) Depreciation (Consumption of Fixed Capital)

Reason and Formula: Formula: Net Value = Gross Value − Depreciation (Consumption of Fixed Capital).

Question 5. If Net Factor Income from Abroad is negative, which of the following inequalities holds true?

(A) Gross National Product > Gross Domestic Product (GDP)
(B) Gross National Product < Gross Domestic Product (GDP)
(C) Gross National Product = Gross Domestic Product (GDP)
(D) Net National Product > Gross Domestic Product (GDP)

Answer: (B) Gross National Product < Gross Domestic Product (GDP)

> Reason and Formula: When factor income paid to abroad exceeds factor income received from abroad, Net Factor Income from Abroad is negative, making Gross National Product smaller than Gross Domestic Product (GDP).

Question 6. Why are intermediate goods excluded from the estimation of National Income?

(A) They do not possess any monetary market value
(B) To avoid the problem of double counting
(C) They are always imported from foreign countries
(D) They are classified strictly as capital goods

Answer: (B) To avoid the problem of double counting

> Reason and Formula: The value of intermediate goods is already embedded inside the market value of final goods; counting both would inflate National Income artificially.

Question 7. Which of the following payments is excluded from National Income?

(A) Wages and salaries paid to employees
(B) Rent and interest earned on assets
(C) Old age pension and student scholarships
(D) Corporate profit earned by companies

Answer: (C) Old age pension and student scholarships

> Reason and Formula: Old age pensions and scholarships are unilateral transfer payments made without any corresponding current production of goods or services.

Question 8. According to the Income Method, what is the formula for Net Domestic Product at Factor Cost (NDP)?

(A) Compensation of Employees + Operating Surplus + Mixed Income of Self-Employed
(B) Compensation of Employees + Operating Surplus + Net Indirect Taxes
(C) Gross Domestic Capital Formation + Private Final Consumption Expenditure + Government Final Consumption Expenditure + Net Exports
(D) Value of Output − Intermediate Consumption

Answer: (A) Compensation of Employees + Operating Surplus + Mixed Income of Self-Employed

> Reason and Formula: Summing all domestic factor incomes generated within the domestic territory yields Net Domestic Product at Factor Cost (NDP).

Question 9. Which of the following components constitute Operating Surplus?

(A) Wages, Rent, and Profit
(B) Rent, Royalty, Interest, and Profit
(C) Rent, Wages, and Mixed Income of Self-Employed
(D) Interest, Profit, and Subsidies

Answer: (B) Rent, Royalty, Interest, and Profit

> Reason and Formula: Operating Surplus represents total income earned from property (rent, royalty, interest) and entrepreneurship (profit).

Question 10. What is the correct formula for Gross Domestic Product at Market Price (GDP) under the Expenditure Method?

(A) Private Final Consumption Expenditure + Government Final Consumption Expenditure + Gross Domestic Capital Formation + Net Exports
(B) Private Final Consumption Expenditure + Government Final Consumption Expenditure + Net Domestic Capital Formation − Net Factor Income from Abroad
(C) Compensation of Employees + Operating Surplus + Mixed Income + Net Factor Income from Abroad
(D) Net Value Added at Factor Cost + Depreciation

Answer: (A) Private Final Consumption Expenditure + Government Final Consumption Expenditure + Gross Domestic Capital Formation + Net Exports

> Reason and Formula: Aggregate expenditure on final domestic goods and services equals the sum of private consumption, government consumption, gross domestic capital formation, and net exports (exports minus

imports).

Question 11. Under the Value Added Method, how is Gross Value Added at Market Price calculated?

(A) Sales + Change in Stock
(B) Value of Output − Intermediate Consumption
(C) Sales − Depreciation
(D) Value of Output + Net Indirect Taxes

Answer: (B) Value of Output − Intermediate Consumption

Reason and Formula: Formula: Gross Value Added at Market Price = Value of Output − Intermediate Consumption, where Value of Output = Sales + Change in Stock.

Question 12. What is the exact formula for Change in Stock?

(A) Opening Stock − Closing Stock
(B) Closing Stock − Opening Stock
(C) Sales − Purchases
(D) Exports − Imports

Answer: (B) Closing Stock − Opening Stock

Reason and Formula: Change in Stock measures the net addition to inventory held by producers during the accounting year: Closing Stock minus Opening Stock.

Question 13. What is the ratio of Nominal Gross Domestic Product (GDP) to Real Gross Domestic Product (GDP) multiplied by 100 called?

(A) Consumer Price Index
(B) Gross Domestic Product (GDP) Deflator
(C) Net National Product
(D) Per Capita Income

Answer: (B) Gross Domestic Product (GDP) Deflator

Reason and Formula: Formula: Gross Domestic Product (GDP) Deflator = (Nominal Gross Domestic Product (GDP) / Real Gross Domestic Product (GDP)) × 100. It measures the overall price level change.

Question 14. What is the primary cause of an increase in Real Gross Domestic Product (GDP)?

(A) An increase solely in market prices of commodities
(B) An increase in the physical volume of goods and services produced
(C) An increase in indirect taxes levied by the government
(D) An increase in government subsidies

Answer: (B) An increase in the physical volume of goods and services produced

Reason and Formula: Real Gross Domestic Product (GDP) is valued at constant base-year prices, so it changes only when physical output changes.

Question 15. If Nominal Gross Domestic Product (GDP) is ₹1,200 crore and the Price Index (Base Year = 100) is 150, what is the Real Gross Domestic Product (GDP)?

(A) ₹1,800 crore
(B) ₹800 crore
(C) ₹1,050 crore
(D) ₹1,350 crore

Answer: (B) ₹800 crore

Reason and Formula: Formula: Real Gross Domestic Product (GDP) = (Nominal Gross Domestic Product (GDP) / Price Index) × 100 = (1,200 / 150) × 100 = ₹800 crore.

Question 16. How is Per Capita Income calculated?

(A) Gross Domestic Product at Market Price (GDP) / Total Population
(B) Net National Product at Factor Cost (National Income) / Total Population
(C) Personal Income / Working Population
(D) Net Domestic Product at Factor Cost (NDP) / Total Population

Answer: (B) Net National Product at Factor Cost (National Income) / Total Population

Reason and Formula: Per Capita Income measures average income per person in a country by dividing National Income by total population.

Question 17. Which of the following is included within the Domestic Territory of India?

(A) Indian Embassy located in Tokyo, Japan
(B) Embassy of the United States located in New Delhi
(C) Branch of State Bank of India operating in London
(D) Office of Tata Consultancy Services operating in New York

Answer: (A) Indian Embassy located in Tokyo, Japan

Reason and Formula: Embassies, consulates, and military establishments of a country located abroad form part of its domestic territory, whereas foreign embassies inside India do not.

Question 18. Who among the following is considered a Normal Resident of India?

(A) A foreign diplomat residing in New Delhi for two years
(B) An Indian citizen staying in the United Kingdom for six months for business purposes
(C) A foreign tourist visiting Jaipur for three months
(D) A foreign employee of the World Health Organization working in Mumbai for one year

Answer: (B) An Indian citizen staying in the United Kingdom for six months for business purposes

Reason and Formula: A person residing abroad for less than one year retains their centre of economic interest in their home country (India) and remains a normal resident of India.

Question 19. Which of the following is the correct formula for Personal Disposable Income?

(A) Personal Income − Direct Personal Taxes − Miscellaneous Receipts of Government Administrative Departments
(B) National Income + Subsidies
(C) Personal Income + Direct Taxes
(D) Net National Product at Market Price − Depreciation

Answer: (A) Personal Income − Direct Personal Taxes − Miscellaneous Receipts of Government Administrative Departments

Reason and Formula: Personal Disposable Income is the actual income left with households for consumption and saving after paying direct taxes and compulsory government fees/fines.

Question 20. Why is the sale and purchase of a second-hand car excluded from the current year's National Income?

(A) It is an unauthorized transaction
(B) Its production value was already counted in the year it was originally manufactured
(C) Goods and Services Tax is not applicable on used vehicles
(D) It is not a consumer durable good

Answer: (B) Its production value was already counted in the year it was originally manufactured

Reason and Formula: Second-hand transactions merely transfer ownership of an existing asset without adding new production (though any commission earned by a dealer in the current year is included).

Question 21. What does the difference between Gross National Product at Factor Cost and Net National Product at Factor Cost equal?

(A) Net Factor Income from Abroad
(B) Depreciation (Consumption of Fixed Capital)
(C) Net Indirect Taxes
(D) Subsidies

Answer: (B) Depreciation (Consumption of Fixed Capital)

Reason and Formula: Formula: Gross National Product at Factor Cost − Net National Product at Factor Cost = Depreciation.

Question 22. What does the difference between Net National Product at Market Price and Net National Product at Factor Cost equal?

(A) Depreciation
(B) Net Indirect Taxes

(C) Net Factor Income from Abroad
(D) Retained Earnings

Answer: (B) Net Indirect Taxes

> Reason and Formula: Formula: Net National Product at Market Price − Net National Product at Factor Cost = Net Indirect Taxes (Indirect Taxes minus Subsidies).

Question 23. If Subsidies are ₹200 crore and Indirect Taxes are ₹900 crore, what is the value of Net Indirect Taxes?

(A) ₹1,100 crore
(B) ₹700 crore
(C) −₹700 crore
(D) ₹200 crore

Answer: (B) ₹700 crore

> Reason and Formula: Formula: Net Indirect Taxes = Indirect Taxes − Subsidies = 900 − 200 = ₹700 crore.

Question 24. What is the relationship between Gross Domestic Capital Formation and Net Domestic Capital Formation?

(A) Gross Domestic Capital Formation = Net Domestic Capital Formation + Depreciation
(B) Gross Domestic Capital Formation = Net Domestic Capital Formation − Depreciation
(C) Gross Domestic Capital Formation = Net Domestic Capital Formation + Net Factor Income from Abroad
(D) Gross Domestic Capital Formation = Net Domestic Capital Formation − Net Indirect Taxes

Answer: (A) Gross Domestic Capital Formation = Net Domestic Capital Formation + Depreciation

> Reason and Formula: Gross investment includes replacement investment (depreciation) plus net addition to capital stock (net investment).

Question 25. Identify the incorrect statement among the following:

(A) Real Gross Domestic Product (GDP) is a better indicator of economic welfare than Nominal Gross Domestic Product (GDP)
(B) Transfer income is included in National Income
(C) Imputed rent of owner-occupied houses is included in National Income
(D) Intermediate goods are merged into final goods

Answer: (B) Transfer income is included in National Income

> Reason and Formula: Transfer income is unearned income received without rendering any productive factor service, so it is strictly excluded from National Income.

Question 26. Why is the imputed rent of self-occupied houses included in National Income?

(A) Because residential property is exempt from income tax
(B) Because owner-occupied houses provide housing services whose estimated rental value can be imputed
(C) Because it represents a capital gain on real estate
(D) Because it is treated as an intermediate business expense

Answer: (B) Because owner-occupied houses provide housing services whose estimated rental value can be imputed

> Reason and Formula: Whether a house is rented out or occupied by the owner, it generates a flow of housing services; hence, its estimated market rent is included in National Income.

Question 27. What does Green Gross National Product take into account?

(A) Only agricultural and forestry output
(B) Environmental degradation and depletion of natural resources
(C) Foreign exchange reserves held by the central bank
(D) Fiscal deficit of the central government

Answer: (B) Environmental degradation and depletion of natural resources

> Reason and Formula: Green Gross National Product adjusts conventional National Income by deducting the monetary cost of environmental damage and natural resource depletion.

Question 28. If Gross Domestic Product at Factor Cost (GDP) is ₹5,000 crore and Net Factor Income from Abroad is −₹300 crore, what is Gross National Product at Factor Cost?

(A) ₹5,300 crore
(B) ₹4,700 crore
(C) ₹5,000 crore
(D) ₹4,300 crore

Answer: (B) ₹4,700 crore

> Reason and Formula: Formula: Gross National Product at Factor Cost = Gross Domestic Product at Factor Cost (GDP) + Net Factor Income from Abroad = 5,000 + (−300) = ₹4,700 crore.

Question 29. Between which two sectors does the circular flow of income operate in a two-sector economy?

(A) Households and Government
(B) Households and Firms
(C) Firms and Foreign Sector
(D) Commercial Banks and Government

Answer: (B) Households and Firms

> Reason and Formula: In a simple two-sector model, households supply factor services to firms, and firms supply final goods and services along with factor payments to households.

Question 30. Which of the following is NOT an injection into the circular flow of income?

(A) Investment Expenditure
(B) Government Expenditure
(C) Exports
(D) Household Savings

Answer: (D) Household Savings

> Reason and Formula: Savings withdraw money from the circular flow and are classified as a leakage; Investment, Government Expenditure, and Exports are injections.

Part B: Assertion–Reason and Conceptual Questions (Questions 31 to 40)

Question 31. Assertion (A): Non-monetary barter exchanges are difficult to measure accurately in National Income. Reason (R): Market price valuation for barter transactions is not directly recorded in monetary terms.

(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.

Answer: (A) Both Assertion (A) and Reason (R) are true, and Reason (R) is the correct explanation of Assertion (A).

> Reason and Formula: In barter exchanges (such as goods exchanged for goods in rural areas), absence of money prices leads to underestimation of National Income.

Question 32. Assertion (A): Higher Gross Domestic Product (GDP) does not always guarantee higher economic welfare. Reason (R): Income distribution may become highly unequal, or negative externalities like pollution may increase alongside output.

(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.

Answer: (A) Both Assertion (A) and Reason (R) are true, and Reason (R) is the correct explanation of Assertion (A).

> Reason and Formula: Gross Domestic Product (GDP) measures aggregate output, not how equitably it is distributed or whether environmental quality is deteriorating.

Question 33. Assertion (A): Capital goods purchased by producing enterprises are treated as final goods. Reason (R): Capital goods are used repeatedly in the production process and are not meant for resale or

raw-material transformation within the same year.

(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.

Answer: (A) Both Assertion (A) and Reason (R) are true, and Reason (R) is the correct explanation of Assertion (A).

> Reason and Formula: Expenditure on plant and machinery constitutes final investment expenditure (Gross Domestic Fixed Capital Formation).

Question 34. Assertion (A): Corporate tax is not added separately while computing National Income by the Income Method. Reason (R): Corporate profit already includes corporate tax, dividend, and retained earnings.

(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.

Answer: (A) Both Assertion (A) and Reason (R) are true, and Reason (R) is the correct explanation of Assertion (A).

> Reason and Formula: Formula: Profit = Corporate Tax + Dividend + Retained Earnings. Adding corporate tax separately when total profit is already given would cause double counting.

Question 35. Assertion (A): Financial gifts received from relatives living abroad are included in National Income. Reason (R): Such gifts represent factor income earned from productive services rendered abroad.

(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) Both Assertion (A) and Reason (R) are false.

Answer: (D) Both Assertion (A) and Reason (R) are false.

> Reason and Formula: Gifts from abroad are unilateral current transfers, not factor income, and are therefore excluded from National Income.

Question 36. Why is the purchase of a machine by a manufacturing firm treated as Capital Expenditure, whereas the same machine held by a machinery dealer is treated as Inventory (Intermediate Stock)?

Answer: Classification depends on the end-use of the commodity.

> Reason and Formula: The manufacturing firm uses the machine for production over several years (final investment good), whereas the dealer holds it for resale to customers (intermediate stock).

Question 37. Why is the production of food grains for self-consumption by a farmer included in National Income?

Answer: Included because it represents current productive output with an imputable market value.

> Reason and Formula: Even though the produce is not sold in the market, it adds to the total flow of goods produced in the economy and is valued at prevailing market prices.

Question 38. Why are windfall gains (such as lottery prizes or sudden capital gains on land) excluded from National Income?

Answer: Excluded because no productive activity or factor service takes place.

> Reason and Formula: Windfall gains represent mere transfers or appreciation of existing wealth rather than creation of new goods and services.

Question 39. Under what condition will Net Domestic Product at Factor Cost (NDP) be equal to Net National Product at Factor Cost?

Answer: When Net Factor Income from Abroad equals zero.

> Reason and Formula: Formula: Net National Product at Factor Cost = Net Domestic Product at Factor Cost (NDP) + Net Factor Income from Abroad. When Net Factor Income from Abroad = 0, both aggregates are identical.

Question 40. If Gross National Product at Market Price is ₹8,000 crore, Depreciation is ₹600 crore, and Net Indirect Taxes are ₹500 crore, calculate Net National Product at Factor Cost.

Answer: ₹6,900 crore

> Reason and Formula: Formula: Net National Product at Factor Cost = Gross National Product at Market Price − Depreciation − Net Indirect Taxes = 8,000 − 600 − 500 = ₹6,900 crore.

Part C: Numerical and Short Answer Questions (Questions 41 to 50)

Question 41. Calculate Net Domestic Product at Factor Cost (NDP) from the following data: Compensation of Employees = ₹2,400 crore, Rent = ₹500 crore, Interest = ₹400 crore, Profit = ₹900 crore, Mixed Income of Self-Employed = ₹600 crore.

Answer: ₹4,800 crore

> Reason and Formula: Formula: Net Domestic Product at Factor Cost (NDP) = Compensation of Employees + Operating Surplus (Rent + Interest + Profit) + Mixed Income of Self-Employed = 2,400 + (500 + 400 + 900) + 600 = ₹4,800 crore.

Question 42. If Net Domestic Product at Factor Cost (NDP) is ₹4,800 crore and Net Factor Income from Abroad is −₹200 crore, calculate National Income (Net National Product at Factor Cost).

Answer: ₹4,600 crore

> Reason and Formula: Formula: Net National Product at Factor Cost = Net Domestic Product at Factor Cost (NDP) + Net Factor Income from Abroad = 4,800 + (−200) = ₹4,600 crore.

Question 43. Calculate Gross Value Added at Market Price using the Value Added Method: Sales = ₹1,500 lakh, Closing Stock = ₹300 lakh, Opening Stock = ₹100 lakh, Intermediate Purchases = ₹700 lakh.

Answer: ₹1,000 lakh

> Reason and Formula: Formula: Change in Stock = Closing Stock − Opening Stock = 300 − 100 = ₹200 lakh; Value of Output = Sales + Change in Stock = 1,500 + 200 = ₹1,700 lakh; Gross Value Added at Market Price = Value of Output − Intermediate Purchases = 1,700 − 700 = ₹1,000 lakh.

Question 44. Using the data from Question 43, if Depreciation is ₹120 lakh and Net Indirect Taxes are ₹80 lakh, calculate Net Value Added at Factor Cost.

Answer: ₹800 lakh

> Reason and Formula: Formula: Net Value Added at Factor Cost = Gross Value Added at Market Price − Depreciation − Net Indirect Taxes = 1,000 − 120 − 80 = ₹800 lakh.

Question 45. Calculate Gross Domestic Product at Market Price (GDP) using the Expenditure Method: Private Final Consumption Expenditure = ₹3,200 crore, Government Final Consumption Expenditure = ₹1,100 crore, Gross Domestic Capital Formation = ₹1,400 crore, Exports = ₹450 crore, Imports = ₹600 crore.

Answer: ₹5,550 crore

> Reason and Formula: Formula: Net Exports = Exports − Imports = 450 − 600 = −₹150 crore; Gross Domestic Product at Market Price (GDP) = Private Final Consumption Expenditure + Government Final Consumption Expenditure + Gross Domestic Capital Formation + Net Exports = 3,200 + 1,100 + 1,400 − 150 = ₹5,550 crore.

Question 46. If Real Gross Domestic Product (GDP) is ₹2,000 crore and the Gross Domestic Product (GDP) Deflator is 125, calculate Nominal Gross Domestic Product (GDP).

Answer: ₹2,500 crore

> Reason and Formula: Formula: Nominal Gross Domestic Product (GDP) = (Real Gross Domestic Product (GDP) × Gross Domestic Product (GDP) Deflator) / 100 = (2,000 × 125) / 100 = ₹2,500 crore.

Question 47. State the exact difference between Gross Domestic Fixed Capital Formation and Gross Domestic Capital Formation.

Answer: Gross Domestic Capital Formation = Gross Domestic Fixed Capital Formation + Change in Stock.

> Reason and Formula: Gross Domestic Fixed Capital Formation covers only fixed assets (machinery, construction), whereas Gross Domestic Capital Formation also includes inventory investment (Closing Stock minus Opening Stock).

Question 48. If Gross National Product at Factor Cost is ₹6,200 crore, Indirect Taxes are ₹750 crore, Subsidies are ₹150 crore, and Depreciation is ₹400 crore, calculate Net National Product at Market Price.

Answer: ₹6,400 crore

> Reason and Formula: Formula: Net Indirect Taxes = Indirect Taxes − Subsidies = 750 − 150 = ₹600 crore; Net National Product at Market Price = Gross National Product at Factor Cost − Depreciation + Net Indirect Taxes = 6,200 − 400 + 600 = ₹6,400 crore.

Question 49. Explain why the Value Added Method, Income Method, and Expenditure Method yield identical estimates of National Income.

Answer: Because production, income generation, and final expenditure represent three identical phases of the circular flow of income.

> Reason and Formula: Every rupee of value added in production is distributed as factor income (wages, rent, interest, profit) and is ultimately spent on final goods and services.

Question 50. If the total population of a country is 10 crore and its Net National Product at Factor Cost (National Income) is ₹5,00,000 crore, calculate Per Capita Income.

Answer: ₹50,000

> Reason and Formula: Formula: Per Capita Income = Net National Product at Factor Cost / Total Population = ₹5,00,000 crore / 10 crore = ₹50,000.

Section 3: Last 10 Years CBSE Board Examination Numericals (2016–2025) with Step-by-Step Solutions

Board Numerical 1 (CBSE 2016). Calculate Net National Product at Factor Cost (National Income) from the following data:

Serial Number	Particulars	Amount (in ₹ Crore)
(i)	Private Final Consumption Expenditure	900
(ii)	Profit	100
(iii)	Government Final Consumption Expenditure	400
(iv)	Net Indirect Taxes	100
(v)	Gross Domestic Capital Formation	250
(vi)	Change in Stock (Closing Stock minus Opening Stock)	50
(vii)	Net Factor Income from Abroad	(-) 40
(viii)	Consumption of Fixed Capital (Depreciation)	20
(ix)	Net Imports	30

- Method Used: Expenditure Method (Note: Change in Stock is ignored because Gross Domestic Capital Formation already includes Change in Stock; Net Imports = ₹30 crore implies Net Exports = −₹30 crore).
- Formula: Gross Domestic Product at Market Price (GDP) = Private Final Consumption Expenditure + Government Final Consumption Expenditure + Gross Domestic Capital Formation + Net Exports
- Gross Domestic Product at Market Price (GDP) = 900 + 400 + 250 + (−30) = ₹1,520 crore
- Formula: Net National Product at Factor Cost = Gross Domestic Product at Market Price (GDP) − Consumption of Fixed Capital (Depreciation) + Net Factor Income from Abroad − Net Indirect Taxes
- Net National Product at Factor Cost = 1,520 − 20 + (−40) − 100 = ₹1,360 crore

Final Answer: ₹1,360 crore

Board Numerical 2 (CBSE 2017). Calculate Gross National Product at Market Price from the following data:

Serial Number	Particulars	Amount (in ₹ Crore)
(i)	Compensation of Employees	2,000
(ii)	Interest	500

Serial Number	Particulars	Amount (in ₹ Crore)
(iii)	Rent	700
(iv)	Profits	800
(v)	Employers' Contribution to Social Security Schemes	200
(vi)	Dividends	300
(vii)	Consumption of Fixed Capital (Depreciation)	100
(viii)	Net Indirect Taxes	250
(ix)	Net Exports	70
(x)	Net Factor Income to Abroad	150
(xi)	Mixed Income of Self-Employed	1,500

• Method Used: Income Method (Note: Employers' Contribution to Social Security Schemes is already included in Compensation of Employees; Dividends are already included in Profits; Net Factor Income to Abroad = ₹150 crore means Net Factor Income from Abroad = −₹150 crore).

• Formula: Net Domestic Product at Factor Cost (NDP) = Compensation of Employees + Operating Surplus (Rent + Interest + Profits) + Mixed Income of Self-Employed

• Net Domestic Product at Factor Cost (NDP) = 2,000 + (700 + 500 + 800) + 1,500 = 2,000 + 2,000 + 1,500 = ₹5,500 crore

• Formula: Gross National Product at Market Price = Net Domestic Product at Factor Cost (NDP) + Consumption of Fixed Capital (Depreciation) + Net Factor Income from Abroad + Net Indirect Taxes

• Gross National Product at Market Price = 5,500 + 100 + (−150) + 250 = ₹5,700 crore

Final Answer: ₹5,700 crore

Board Numerical 3 (CBSE 2018). Calculate (a) Operating Surplus, and (b) Domestic Income (Net Domestic Product at Factor Cost (NDP)) from the following data:

Serial Number	Particulars	Amount (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 (Depreciation)	100
(vi)	Subsidies	20
(vii)	Dividend	940
(viii)	Undistributed Profits (Retained Earnings)	300
(ix)	Net Factor Income to Abroad	150
(x)	Mixed Income of Self-Employed	200

• Step 1 (Profit Calculation): Profit = Corporation Tax + Dividend + Undistributed Profits = 460 + 940 + 300 = ₹1,700 crore

• Step 2 (Operating Surplus): Formula: Operating Surplus = Rent and Interest + Profit = 800 + 1,700 = ₹2,500 crore

• Step 3 (Domestic Income): Formula: Net Domestic Product at Factor Cost (NDP) = Compensation of Employees + Operating Surplus + Mixed Income of Self-Employed

• Net Domestic Product at Factor Cost (NDP) = 2,000 + 2,500 + 200 = ₹4,700 crore

Final Answer: (a) Operating Surplus = ₹2,500 crore; (b) Net Domestic Product at Factor Cost (NDP) = ₹4,700 crore

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Board Numerical 4 (CBSE 2019). Calculate Net Value Added at Factor Cost from the following data:

Serial Number	Particulars	Amount (in ₹ Crore)
(i)	Purchase of Machinery to be used in the Production Unit	100
(ii)	Sales	200
(iii)	Intermediate Costs	90
(iv)	Indirect Taxes	12
(v)	Change in Stock (Closing Stock minus Opening Stock)	10
(vi)	Excise Duty	6
(vii)	Stock of Raw Material	5

• Method Used: Value Added Method (Note: Purchase of machinery is a capital expenditure, not an intermediate cost; Excise Duty is already part of Indirect Taxes; Stock of raw material is an opening/closing stock balance, whereas Change in Stock is already given; Subsidies and Depreciation are zero as not given).

• Formula: Value of Output = Sales + Change in Stock = 200 + 10 = ₹210 crore

• Formula: Gross Value Added at Market Price = Value of Output − Intermediate Costs = 210 − 90 = ₹120 crore

• Formula: Net Value Added at Factor Cost = Gross Value Added at Market Price − Depreciation − Net Indirect Taxes = 120 − 0 − 12 = ₹108 crore

Final Answer: ₹108 crore

Board Numerical 5 (CBSE 2020). Calculate Net Domestic Product at Factor Cost (NDP) by the Expenditure Method from the following data:

Serial Number	Particulars	Amount (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 (Depreciation)	60
(vi)	Fixed Domestic Capital Formation	500
(vii)	Change in Stock (Closing Stock minus Opening Stock)	100
(viii)	Factor Income to Abroad	40
(ix)	Factor Income from Abroad	90
(x)	Indirect Taxes	700
(xi)	Subsidies	50

• Step 1: Gross Domestic Capital Formation = Fixed Domestic Capital Formation + Change in Stock = 500 + 100 = ₹600 crore

• Step 2: Net Exports = Exports − Imports = 70 − 120 = −₹50 crore

• Step 3: Gross Domestic Product at Market Price (GDP) = Private Final Consumption Expenditure + Government Final Consumption Expenditure + Gross Domestic Capital Formation + Net Exports = 8,000 + 1,000 + 600 − 50 = ₹9,550 crore

• Step 4: Net Indirect Taxes = Indirect Taxes − Subsidies = 700 − 50 = ₹650 crore

• Step 5: Net Domestic Product at Factor Cost (NDP) = Gross Domestic Product at Market Price (GDP) − Consumption of Fixed Capital (Depreciation) − Net Indirect Taxes = 9,550 − 60 − 650 = ₹8,840 crore

Final Answer: ₹8,840 crore

Board Numerical 6 (CBSE 2021 — Term 1 / Sample Paper Pattern). If Real Gross Domestic Product (GDP) is ₹400 crore and Nominal Gross Domestic Product (GDP) is ₹450 crore, calculate the Price Index (Base Year =

100). Further, if the Price Index rises to 125 in the next year with the same Real Gross Domestic Product (GDP), calculate the new Nominal Gross Domestic Product (GDP).

- Part 1: Formula: Price Index (Gross Domestic Product (GDP) Deflator) = (Nominal Gross Domestic Product (GDP) / Real Gross Domestic Product (GDP)) × 100
- Price Index = (450 / 400) × 100 = 112.5
- Part 2: Formula: New Nominal Gross Domestic Product (GDP) = (Real Gross Domestic Product (GDP) × New Price Index) / 100
- New Nominal Gross Domestic Product (GDP) = (400 × 125) / 100 = ₹500 crore

Final Answer: Price Index = 112.5; New Nominal Gross Domestic Product (GDP) = ₹500 crore

Board Numerical 7 (CBSE 2022 — Term 2). Calculate Net National Product at Factor Cost (National Income) from the following data:

Serial Number	Particulars	Amount (in ₹ Crore)
(i)	Net Domestic Fixed Capital Formation	350
(ii)	Closing Stock	100
(iii)	Opening Stock	60
(iv)	Consumption of Fixed Capital (Depreciation)	50
(v)	Indirect Taxes	120
(vi)	Subsidies	20
(vii)	Private Final Consumption Expenditure	1,500
(viii)	Government Final Consumption Expenditure	600
(ix)	Net Exports	(-) 30
(x)	Net Factor Income from Abroad	40

- Step 1: Change in Stock = Closing Stock − Opening Stock = 100 − 60 = ₹40 crore
- Step 2: Gross Domestic Capital Formation = Net Domestic Fixed Capital Formation + Change in Stock + Consumption of Fixed Capital (Depreciation) = 350 + 40 + 50 = ₹440 crore
- Step 3: Gross Domestic Product at Market Price (GDP) = Private Final Consumption Expenditure + Government Final Consumption Expenditure + Gross Domestic Capital Formation + Net Exports = 1,500 + 600 + 440 − 30 = ₹2,510 crore
- Step 4: Net Indirect Taxes = Indirect Taxes − Subsidies = 120 − 20 = ₹100 crore
- Step 5: Net National Product at Factor Cost = Gross Domestic Product at Market Price (GDP) − Consumption of Fixed Capital (Depreciation) + Net Factor Income from Abroad − Net Indirect Taxes = 2,510 − 50 + 40 − 100 = ₹2,400 crore

Final Answer: ₹2,400 crore

Board Numerical 8 (CBSE 2023). Calculate Gross Value Added at Factor Cost from the following data:

Serial Number	Particulars	Amount (in ₹ Crore)
(i)	Units of Output Sold (in units)	2,000
(ii)	Price per Unit of Output (in ₹)	20
(iii)	Depreciation	2,000
(iv)	Change in Stock (Closing Stock minus Opening Stock)	(-) 500
(v)	Intermediate Cost	15,000
(vi)	Subsidy	3,000

- Step 1: Sales = Units of Output Sold × Price per Unit = 2,000 × 20 = ₹40,000 crore
- Step 2: Value of Output = Sales + Change in Stock = 40,000 + (−500) = ₹39,500 crore
- Step 3: Gross Value Added at Market Price = Value of Output − Intermediate Cost = 39,500 − 15,000 = ₹24,500 crore

• Step 4: Net Indirect Taxes = Indirect Taxes − Subsidies = 0 − 3,000 = −₹3,000 crore

• Step 5: Gross Value Added at Factor Cost = Gross Value Added at Market Price − Net Indirect Taxes = 24,500 − (−3,000) = ₹27,500 crore

Final Answer: ₹27,500 crore

Board Numerical 9 (CBSE 2024). Calculate National Income (Net National Product at Factor Cost) by both Income Method and Expenditure Method from the following data:

Serial Number	Particulars	Amount (in ₹ Crore)
(i)	Compensation of Employees	1,200
(ii)	Net Factor Income from Abroad	(-) 20
(iii)	Net Indirect Taxes	120
(iv)	Profit	800
(v)	Private Final Consumption Expenditure	2,000
(vi)	Net Domestic Capital Formation	770
(vii)	Consumption of Fixed Capital (Depreciation)	130
(viii)	Rent	400
(ix)	Interest	620
(x)	Mixed Income of Self-Employed	700
(xi)	Net Exports	(-) 30
(xii)	Government Final Consumption Expenditure	1,100

• Income Method:

• • Net Domestic Product at Factor Cost (NDP) = Compensation of Employees + Rent + Interest + Profit + Mixed Income of Self-Employed = 1,200 + 400 + 620 + 800 + 700 = ₹3,720 crore

• • Net National Product at Factor Cost = Net Domestic Product at Factor Cost (NDP) + Net Factor Income from Abroad = 3,720 + (−20) = ₹3,700 crore

• Expenditure Method:

• • Gross Domestic Capital Formation = Net Domestic Capital Formation + Consumption of Fixed Capital (Depreciation) = 770 + 130 = ₹900 crore

• • Gross Domestic Product at Market Price (GDP) = Private Final Consumption Expenditure + Government Final Consumption Expenditure + Gross Domestic Capital Formation + Net Exports = 2,000 + 1,100 + 900 − 30 = ₹3,970 crore

• • Net National Product at Factor Cost = Gross Domestic Product at Market Price (GDP) − Consumption of Fixed Capital (Depreciation) + Net Factor Income from Abroad − Net Indirect Taxes = 3,970 − 130 − 20 − 120 = ₹3,700 crore

Final Answer: ₹3,700 crore (by both Income Method and Expenditure Method)

Board Numerical 10 (CBSE 2025). Calculate (a) Net Domestic Product at Factor Cost (NDP), and (b) Gross National Product at Market Price from the following data:

Serial Number	Particulars	Amount (in ₹ Crore)
(i)	Private Final Consumption Expenditure	4,500
(ii)	Government Final Consumption Expenditure	1,500
(iii)	Net Domestic Fixed Capital Formation	950
(iv)	Opening Stock	240
(v)	Closing Stock	290
(vi)	Consumption of Fixed Capital (Depreciation)	200
(vii)	Exports	650

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Serial Number	Particulars	Amount (in ₹ Crore)
(viii)	Imports	800
(ix)	Factor Income Earned from Abroad	180
(x)	Factor Income Paid to Abroad	230
(xi)	Goods and Services Tax (Indirect Taxes)	420
(xii)	Subsidies	70

• Step 1: Change in Stock = Closing Stock − Opening Stock = 290 − 240 = ₹50 crore

• Step 2: Gross Domestic Capital Formation = Net Domestic Fixed Capital Formation + Change in Stock + Consumption of Fixed Capital (Depreciation) = 950 + 50 + 200 = ₹1,200 crore

• Step 3: Net Exports = Exports − Imports = 650 − 800 = −₹150 crore

• Step 4: Gross Domestic Product at Market Price (GDP) = 4,500 + 1,500 + 1,200 − 150 = ₹7,050 crore

• Step 5: Net Indirect Taxes = Goods and Services Tax − Subsidies = 420 − 70 = ₹350 crore

• Step 6: Net Domestic Product at Factor Cost (NDP) = Gross Domestic Product at Market Price (GDP) − Consumption of Fixed Capital (Depreciation) − Net Indirect Taxes = 7,050 − 200 − 350 = ₹6,500 crore

• Step 7: Net Factor Income from Abroad = Factor Income Earned from Abroad − Factor Income Paid to Abroad = 180 − 230 = −₹50 crore

• Step 8: Gross National Product at Market Price = Gross Domestic Product at Market Price (GDP) + Net Factor Income from Abroad = 7,050 + (−50) = ₹7,000 crore

Final Answer: (a) Net Domestic Product at Factor Cost (NDP) = ₹6,500 crore; (b) Gross National Product at Market Price = ₹7,000 crore

Section 4: High-Probability Expected Questions for Academic Session 2026–27 (With Reasons and Formulas)

Expected Question 1 (Multi-Sector Value Added & Missing Value Numerical). In a three-sector economy (Primary, Secondary, and Tertiary), Primary Sector sells output worth ₹1,200 crore to Secondary Sector and ₹400 crore directly to households, with Closing Stock of ₹150 crore and Opening Stock of ₹100 crore, and Intermediate Consumption of ₹350 crore. Secondary Sector uses all purchases from Primary Sector as intermediate input, incurs additional intermediate input of ₹250 crore, and generates Sales of ₹2,600 crore with no Change in Stock. Tertiary Sector generates Gross Value Added at Market Price of ₹1,800 crore. If Depreciation is ₹300 crore, Indirect Taxes are ₹450 crore, Subsidies are ₹100 crore, and Net Factor Income from Abroad is −₹80 crore, calculate Net National Product at Factor Cost (National Income).

• Step 1 (Primary Sector): Sales = 1,200 + 400 = ₹1,600 crore; Change in Stock = Closing Stock − Opening Stock = 150 − 100 = ₹50 crore; Value of Output = 1,600 + 50 = ₹1,650 crore; Gross Value Added at Market Price (Primary) = 1,650 − 350 = ₹1,300 crore.

• Step 2 (Secondary Sector): Intermediate Consumption = 1,200 + 250 = ₹1,450 crore; Gross Value Added at Market Price (Secondary) = 2,600 − 1,450 = ₹1,150 crore.

• Step 3 (Economy Total): Gross Domestic Product at Market Price (GDP) = Gross Value Added at Market Price (Primary + Secondary + Tertiary) = 1,300 + 1,150 + 1,800 = ₹4,250 crore.

• Step 4 (National Income): Net Indirect Taxes = Indirect Taxes − Subsidies = 450 − 100 = ₹350 crore; Net National Product at Factor Cost = Gross Domestic Product at Market Price (GDP) − Depreciation + Net Factor Income from Abroad − Net Indirect Taxes = 4,250 − 300 + (−80) − 350 = ₹3,520 crore.

Final Answer: ₹3,520 crore (Reason & Formula: Multi-stage value-added numericals test elimination of intermediate sales between sectors using Gross Value Added at Market Price = Value of Output – Intermediate Consumption).

Expected Question 2 (Missing Component Numerical — Expenditure & Income Reconciliation). From the following data, find the missing value of Government Final Consumption Expenditure if Net National Product at Factor Cost (National Income) is ₹6,000 crore: Private Final Consumption Expenditure = ₹3,800 crore, Net Domestic Fixed Capital Formation = ₹1,100 crore, Change in Stock (Closing Stock minus Opening

Stock) = ₹100 crore, Consumption of Fixed Capital (Depreciation) = ₹250 crore, Net Exports = −₹150 crore, Net Factor Income from Abroad = ₹100 crore, Net Indirect Taxes = ₹400 crore.

- Formula: Net National Product at Factor Cost = Gross Domestic Product at Market Price (GDP) − Consumption of Fixed Capital (Depreciation) + Net Factor Income from Abroad − Net Indirect Taxes.
- Step 1: Gross Domestic Capital Formation = Net Domestic Fixed Capital Formation + Change in Stock + Consumption of Fixed Capital (Depreciation) = 1,100 + 100 + 250 = ₹1,450 crore.
- Step 2: Gross Domestic Product at Market Price (GDP) = 3,800 + Government Final Consumption Expenditure + 1,450 − 150 = 5,100 + Government Final Consumption Expenditure.
- Step 3: Substitute into National Income equation: 6,000 = (5,100 + Government Final Consumption Expenditure) − 250 + 100 − 400.
- Step 4: 6,000 = 4,550 + Government Final Consumption Expenditure ⇒ Government Final Consumption Expenditure = 6,000 − 4,550 = ₹1,450 crore.

Final Answer: Government Final Consumption Expenditure = ₹1,450 crore (Reason & Formula: Competency-based Board papers increasingly ask reverse/missing-figure problems using Gross Domestic Product at Market Price (GDP) = Private Final Consumption Expenditure + Government Final Consumption Expenditure + Gross Domestic Capital Formation + Net Exports).

Expected Question 3 (Real vs Nominal Gross Domestic Product (GDP) & Deflator Case Study). In an economy, Nominal Gross Domestic Product (GDP) grew from ₹10,000 crore in 2024–25 to ₹13,200 crore in 2025–26, while the Gross Domestic Product (GDP) Deflator rose from 100 to 120. Calculate (a) Real Gross Domestic Product (GDP) in 2025–26, (b) the percentage growth rate in Real Gross Domestic Product (GDP), and (c) state with reason whether economic welfare necessarily improved by 32%.

- Formula (a): Real Gross Domestic Product (GDP) = (Nominal Gross Domestic Product (GDP) / Gross Domestic Product (GDP) Deflator) × 100 = (13,200 / 120) × 100 = ₹11,000 crore.
- Formula (b): Real Growth Rate = ((Real Gross Domestic Product (GDP) in 2025–26 − Real Gross Domestic Product (GDP) in 2024–25) / Real Gross Domestic Product (GDP) in 2024–25) × 100 = ((11,000 − 10,000) / 10,000) × 100 = 10%.
- Reason (c): No, economic welfare did not improve by 32% because 20 percentage points of the nominal increase were purely due to price inflation. Real physical output increased by only 10%, and actual welfare still depends on income distribution, composition of output, and environmental externalities.

Final Answer: (a) Real Gross Domestic Product (GDP) = ₹11,000 crore; (b) Real Growth Rate = 10%; (c) No, inflation accounts for the remaining rise.

Expected Question 4 (Treatment of Specific Items in Domestic Income vs National Income). Giving valid reasons, state whether the following items will be included in or excluded from Domestic Income (Net Domestic Product at Factor Cost (NDP)) and National Income (Net National Product at Factor Cost) of India: (a) Salaries paid to Indian residents working in the Russian Embassy in New Delhi. (b) Profits earned by a branch of a foreign bank operating in Mumbai. (c) Expenditure on maintenance of an office building by a business firm. (d) Free medical facilities provided by an employer to employees.

- (a) Excluded from Domestic Income (Net Domestic Product at Factor Cost (NDP)) because the Russian Embassy is part of Russian domestic territory, not Indian domestic territory. Included in National Income because the recipients are normal residents of India (counted under Net Factor Income from Abroad).
- (b) Included in Domestic Income (Net Domestic Product at Factor Cost (NDP)) because the branch operates within the domestic territory of India. Excluded from National Income because profits belong to a foreign company (deducted via Net Factor Income from Abroad).
- (c) Excluded from both Domestic Income and National Income because routine maintenance expenditure is an intermediate consumption cost incurred to keep the asset operational.
- (d) Included in both Domestic Income and National Income because free medical facilities form part of Compensation of Employees (wages and salaries in kind).

Final Answer: Reason & Formula: Domestic Income = Factor income generated within domestic territory; National Income = Domestic Income + Net Factor Income from Abroad.

Expected Question 5 (Digital Economy & Green Accounting Application Question). Explain how (a) rapid growth of digital payment services and software exports, and (b) rising urban air pollution and

groundwater depletion affect the comparison between conventional Gross Domestic Product at Market Price (GDP) and Green Gross National Product.

- (a) Software exports and digital financial services generate legitimate factor income from abroad and domestic value addition, raising both Gross Domestic Product at Market Price (GDP) and Gross National Product.
- (b) Air pollution and groundwater depletion represent negative externalities and natural capital consumption. Conventional Gross Domestic Product at Market Price (GDP) ignores these environmental costs, whereas Green Gross National Product deducts the monetary value of environmental degradation from conventional National Income.
- Formula: Green Gross National Product = Net National Product at Factor Cost − Monetary Value of Environmental Degradation and Resource Depletion.

Final Answer: Green Gross National Product will be lower than conventional National Income due to environmental depletion costs (Reason: CBSE 2026–27 sample pattern emphasizes sustainability and limitations of Gross Domestic Product (GDP) as a welfare index).

Expected Question 6 (Corporate Profit Breakdown & Operating Surplus Numerical). Calculate Net National Product at Factor Cost (National Income) from the following data: Wages and Salaries in Cash = ₹3,000 crore, Employers' Contribution to Provident Fund = ₹400 crore, Employees' Contribution to Provident Fund = ₹350 crore, Rent and Royalty = ₹600 crore, Interest = ₹500 crore, Corporate Tax = ₹300 crore, Dividend = ₹450 crore, Retained Earnings = ₹250 crore, Mixed Income of Self-Employed = ₹900 crore, Factor Income from Abroad = ₹120 crore, Factor Income to Abroad = ₹190 crore.

- Note: Employees' Contribution to Provident Fund (₹350 crore) is already paid out of Wages and Salaries in Cash, so it is ignored to avoid double counting.
- Formula 1: Compensation of Employees = Wages and Salaries in Cash + Employers' Contribution to Provident Fund = 3,000 + 400 = ₹3,400 crore.
- Formula 2: Profit = Corporate Tax + Dividend + Retained Earnings = 300 + 450 + 250 = ₹1,000 crore.
- Formula 3: Operating Surplus = Rent and Royalty + Interest + Profit = 600 + 500 + 1,000 = ₹2,100 crore.
- Formula 4: Net Domestic Product at Factor Cost (NDP) = Compensation of Employees + Operating Surplus + Mixed Income of Self-Employed = 3,400 + 2,100 + 900 = ₹6,400 crore.
- Formula 5: Net Factor Income from Abroad = Factor Income from Abroad − Factor Income to Abroad = 120 − 190 = −₹70 crore.
- Formula 6: Net National Product at Factor Cost = Net Domestic Product at Factor Cost (NDP) + Net Factor Income from Abroad = 6,400 + (−70) = ₹6,330 crore.

Final Answer: ₹6,330 crore (Reason: Classic trap question testing exclusion of Employees' Contribution to Social Security and summation of Profit components).

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