CHAPTER - 2
NATIONAL INCOME & RELATED AGGREGATES

NCERT TEXTBOOK QUESTIONS SOLVED

1. Why should the aggregate final expenditure of an economy be equal to the aggregate factor payments? Explain. [3 Marks]

Ans: The sum of final expenditures in an economy must be equal to the income received by all the factors of production taken together (final spending on final goods, it does not include spending on intermediate goods). This follows from the simple idea that the revenues earned by all the firms put together must be distributed among the factors of production as salaries, wages, profits, interests earning and rents.

2. What is the difference between planned and unplanned inventory accumulation? Write down the relation between change in inventories and value added of a firm. [3 Marks]

Ans: Planned Inventory. It refers to changes in the stock inventories that have occurred in a planned way. In a situation of planned inventory accumulation, firm will plan to raise its inventories. Unplanned Inventory. It refers to changes in the stock of inventories that have occurred in an unexpected way. In a situation of unplanned inventory accumulation, due to unexpected fall in sales, the firm will have unsold stock of goods.
Value added of a firm (GVA) = Gross value of output produced by the firm – Value of intermediate goods used by the firm.
OR
GVA = Value of sales by the firm + Value of change in inventories – Value of intermediate goods used by the firm

3. Write down the three identities of calculating the GDP of a country by the three methods. Also, briefly explain why each of these should give us the same value of GDP. [3 Marks]

Ans: National Income = National Product = National Expenditure. Each one will give the same result. The only difference is that with product methods, NI is calculated at production or creation level with income Method NI is measured at distribution level, and with expenditure method NI is measured at disposal level.

4. Define budget deficit and trade deficit. The excess of private investment over saving of a country in a particular year was Rs 2,000 crores. The amount of budget deficit was (-) Rs 1,500 crores. What was the volume of trade deficit of that country? [3-4 Marks]

Ans: Budget deficit. It measures the amount by which the government expenditure exceeds the tax revenue earned by it. Budget Deficit = G – T.

Trade deficit: It measures the amount of excess expenditure over the export revenue earned by the country.

Trade Deficit = M – X

Given G – T = (-) Rs 1500 crore

Investment – Saving = Rs 2000 crore Trade deficit = [I – S] + [G – T]

= [2000]+ [-1500] = Rs 500 crore.

5. Suppose the GDP at market price of a country in a particular year was Rs 1,100 crores. Net Factor Income from Abroad was Rs 100 crores. The value of Indirect taxes – Subsidies was Rs 150 crores and National Income was Rs 850 crores. Calculate the aggregate value of depreciation. [3 Marks]

Ans: National Income (or NNPFC) = GDPmp- Depreciation + Net factor income from abroad – [Indirect Taxes-Subsides] 850 = 1100 – Depreciation +100- 150

Depreciation = 1100+ 100- 150-850 Depreciation = Rs 200 Crore

6. Net National Product at Factor Cost of a particular country in a year is Rs 1,900 crores. There are no interest payments made by the households to the firms / government, or by the firms / government to the households. The Personal Disposable Income of the households is Rs 1,200 crores. The personal income taxes paid by them is Rs 600 crores and the value of retained earnings of the firms and government is valued at Rs 200 crores. What is the value of transfer payments made by the government and firms to the households? [3-4 Marks]

Ans: Personal disposable income = Personal income – Personal tax – miscellaneous receipts of government 1200 = Personal Income – 600 – 0 Personal Income = 1800 Crore Private Income = Personal income + retained earnings + corporate tax = 1800 + 200 + 0 = 2000 Crore Private income = NNPFC (National income) – NDPFC of government sector + Value of transfer payment 2000 = 1900 – 0 + Value of transfer payment

Value of transfer payment =100 Crore

7. From the following data, calculate Personal Income and Personal Disposable Income. [6 Marks]

	Particulars	(₹) In Crore
(i)	Net Domestic Product at factor cost	8,000
(ii)	Net Factor Income from abroad	200
(iii)	Undistributed Profit	1,000
(iv)	Corporation Tax	500
(v)	Interest Received by Households	1,500
(vi)	Interest Paid by Households	1,200
(vii)	Transfer Income	300
(viii)	Personal Tax	500

Ans: Private Income = NDPFC – NDPFC of government sector + NFIA + Transfer Income + net interest receive from household (Interest Received by Households – Interest Paid by Households) = (i) – 0 + (ii) + (vii) + [(v) – (vi)]

= 8000 + 200 + 300 + (1500 – 1200)

= 8800 Crore

Personal Income = Private income – Undistributed profit – Corporation tax = 8800 – (iii) – (ii)

= 8800 – 1000 – 500 = 7300 Crore
Personal Disposable Income =
Personal income – Personal tax = 7300 – (viii)
= 7300 – 500 = 6800 Crore

8. In a single day Raju, the barber, collects Rs 500 from haircuts; over this day, his equipment depreciates in value by Rs 50. Of the remaining Rs 450, Raju pays sales tax worth Rs 30, takes home Rs 200 and retains Rs 220 for improvement and buying of new equipment. He further pays Rs 20 as income tax from his income. Based on this information, complete Raju's contribution to the following measures of income

1. **Gross Domestic Product**
2. **NNP at market price**
3. **NNP at factor cost**
4. **Personal income**
5. **Personal disposable income. [3-4 Marks]**

Ans:

1. GDP contribution by Raju = Rs 500
2. NNPMP (Raju's contribution) = GDP – Depreciation = 500 – 50 = Rs 450.
3. NNPrr (Raju's contribution) = NNPMP -Indirect tax =450-30 = Rs 420
4. Personal Income = NNPFC-Retained Earnings = 420 – 220 = Rs 200
5. Personal Disposable Income = Personal Income – Income Tax = 200 – 20 = Rs 180 Crore

9. The value of the nominal GNP of an economy was Rs 2,500 crores in aparticular year. The value of GNP of that countiy during the same year evaluated at the prices of the same base year was Rs 3,000 crores. Calculate the value of the GNP deflator of the year in percentage terms. Did the price level rise between the base year and the year under consideration? [3-4 Marks]
Ans: GNP deflator = Nominal GNP/Real GNP x 100 = 83.3%
No, the price level did not rise between the base year and the year under consideration. In fact, it fell.

10. Write down some of the limitations of using GDP as an index of welfare of a : countiy. [6 Marks]
OR
Explain how distribution of gross domestic product is its limitation as a measure of economic welfare.
[CBSE Delhi 2010]
OR
Explain how 'distribution of gross domestic product' is a limitation in taking domestic product as an index of welfare. [CBSE Delhi 2011]
OR
Can gross domestic product be used as an index of welfare of the people? Give two reasons.
[CBSE Foreign 2010]
OR
Explain Per Capita Real GDP as Indicator of Economic Welfare.
OR
Explain any four limitations of using GDP as a measure/index of welfare of a country. [CBSE Sample Paper 2016]

Ans: Per Capita Real GDP can be taken as indicator for economy. But by itself is not an adequate indicator. There are many reasons behind this. These are:

1. Many goods and services contributing economic welfare are not included in GDP Or Non-Monetary exchanges.
   (a)There are many goods and services which are left out of estimation of national income on account of practical estimation difficulties e.g., services of housewives and other members, own account production, etc.
   (b)These are left on account of non availability of data and problem in valuation.
   (c)It is generally agreed that these items contribute to economic welfare.
   (d)So, if we depend only on GDP, we would be underestimating economic welfare.
2. Though externalities are not taken into account in GDP, they affect welfare.
   (a)When the activities of somebody result in benefits or harms to others with no payment received for the benefit and no payment made for the harm done, such benefits and harms are called externalities.
   (b)Activities resulting in benefits to others are positive externalities and increase welfare; and those resulting in harm to others are called negative externalities, and thus decrease welfare.
   (c)GDP does not take into account these externalities.
   (d)For example, construction of a flyover or a highway reduces transport cost and journey time of its users who have not contributed anything towards its cost. Expenditure on construction is included in GDP but not the positive externalities flowing from it. GDP and positive externalities both increase welfare. Therefore, taking only GDP as an index of welfare understates welfare. It means that welfare is much more than it is indicated by GDP.
   (e)Similarly, GDP also does not take into account negative externalities. For examples, factories produce goods but at the same time create pollution of water and air. River Yamuna, now a drain, is a living example. The pollution harms people. The factories are not required to pay anything for harming people. Producing goods increases welfare but creating pollution reduces welfare. Therefore, taking only GDP as an index of welfare overstates welfare In this case, welfare is much less than indicated by GDP.
3. Change in the distribution of income (GDP) may affect welfare.
   (a)All people do not earn the same amount of income. Some earn more and some earn less. In other words, there is unequal distribution of income.
   (b)At the same time, it is also true that in the event of rise in 'per capita real income' all are not better off equally. 'Per capita' is only an average. Income of some may rise by less and of some by more than the national average. In case of some it may even fall.
   (c)It means that the inequality in the distribution of income may increase or decrease.
   (d)If it increase it implies that rich become more rich and the poor become more poor.
   (e)Utility of a rupee of income to the poor is more than to the rich. Suppose, the income of the poor declines by one rupee and that of the rich increases by one rupee. In such a case, the decline in welfare of the poor will be more than the increase in welfare of the rich.
   (f) Therefore, if the rise in per capita real income inequality increases, it may lead to a decline in welfare (in the macro sense).
4. All products may not contribute equally to economic welfare.
   (a)GDP includes different types of products, like food articles, houses, clothes, police services, military services, etc.
   (b)Some of these products contribute more to the welfare of the people, like food, clothes, houses, etc. Other products like police services, military services etc. may comparatively contribute less and may not directly affect the standard of living of the people.

(c)Therefore, how much is the economic welfare would depend more on. the types of goods and services produced, and not simply how much is produced.
(d) It means that if GDP rises, the increase in welfare may not be in the same proportion.

5. Contribution of some products may be negative
(a)GDP includes all final products whether it is milk or liquor.
(b)Milk may provide both immediate and ultimate satisfaction to consumers On the other hand, liquor may provide some immediate satisfaction, but because of its harmful effects on health it may lead to decline in welfare.
(c)GDP include only the monetary values of the products and not their contribution to welfare.
(d)Therefore, economic welfare depends not only on the volume of consumption but also on the type or goods and services consumed.

MORE QUESTIONS SOLVED

I. VERY SHORT ANSWER TYPE QUESTIONS (1 Mark)

1. Define 'depreciation'. [CBSE (AI) 2011]
Ans: Depreciation is an expected decrease in the value of fixed capital assets due to its general use.

2. When is the net domestic product at market price less than the net domestic product at factor cost?
Ans: When net indirect taxes are negative i.e., subsidies are more than indirect taxes.

3. Why is gross domestic product at factor cost more than the net domestic product at factor cost?
Ans: Gross domestic product at factor cost includes depreciation while net domestic product at factor cost does not include depreciation.

4. When will GDP of an economy be equal to GNP?
Ans: GDP and GNP will be equal when the 'net factor income from abroad' is zero.

5. When will the domestic income exceed the national income?
Ans: When the net factor income from abroad is negative.

6. If NDPFC is Rs 1,0000 crores and NFIA is (-) Rs 500 crores, how much will be the national income?
Ans: National Income = 10000 + (-500)
= Rs 9500 Crore

7. If the domestic factor income is Rs 50,000 crores and the national income is Rs 45,000 crores, how much will be the net factor income from abroad?
Ans: Net factor income from abroad = 45,000 – 50,000 = (-) Rs 5000 Crore

8. Mention the three methods of measuring national income.
Ans:

1. Value added method
2. Income method
3. Expenditure method.

9. Calculate the disposable income, if personal income is Rs 30,000 and the rate of income

tax is 10%.

Ans: Disposable Income = 30,000 – (10% of 30,000) = ?27,000

10. In which type of economy, domestic income will be equal to national income?

Ans: Closed economy.

11. What is the value added method of measuring national income?

Ans: Value added method is the method that measures the national income by estimating the value added by each producing enterprises within the domestic territory of the country in an accounting year.

12. When is value of output equal to value added?

Ans: Value of output is equal to value added if there are no intermediate costs.

13. What aggregate do we get when we add up the gross value added of all the producing sectors of an economy?

Ans: Gross domestic product at market price.

14. What is the rationale for not taking into account the value of intermediate goods in the measure of GDP?

Ans: To avoid the problem of double counting.

15. If compensation of employees in a firm constitutes 65% of net value added at factor cost of a firm, find the proportion of operating surplus.

Ans: 100% – 65% = 35% (assuming mixed income is zero).

16. What is nominal gross domestic product? [CBSE Delhi 2011]

Ans: When gross domestic product (GDP) of a given year is estimated on the basis of price of the same year, it is called nominal GDP.

17. Define primary sector.[CBSE AI2013,]

Ans: It is the sector that produces goods by exploiting natural resources like land, water, forests, mines, etc. This sector includes agricultural and allied activities, fishing, mining and quarrying.

18. Define secondary sector.

Ans: It is called manufacturing sector also. Enterprises in this sector transform one type of commodity into another type of commodity. For example: leather goods from leather, flour from wheat, sugar from sugarcane, etc.

19. Define tertiary sector.

Ans: It is known as service sector also. Enterprises in this sector produce services only. Examples are banking, transport, communications etc.

II.MULTIPLE CHOICE QUESTIONS (1 Mark)

1. Which one of the following statements is incorrect?

(a) GDP at market price = GDP at factor cost plus net indirect taxes.

(b) NNP at factor cost = NNP at market price minus indirect taxes.

(c) GNP at market price = GDP at market price plus net factor income from abroad.

(d) None of them.

Ans: (a)

2. National income differs from net national product at market price by the amount————.
(a) current transfers from the rest of the world
(b) net indirect taxes
(c) national debt interest
(d) it does not differ
Ans: (b)

3. Net national product at factor cost is————-.
(a) equal to national income
(b) less than national income
(c) more than national income
(d) sometimes less than national income and sometimes more than it
Ans: (a)

4. The net values added method of measuring national income is also known as—————-.
(a) net output method
(b) production method
(c) industry of origin method
(d) all of the above
Ans: (d)

5. Identify the item which is not a factor payment:
(a) Free uniforms to defense personnel
(b) Salaries to the members of Parliament
(c) Imputed rent of an owner occupied a building .
(d) Scholarships given to the students of scheduled caste
Ans: (d)

6. Mixed income of the self-employed means
(a) gross profits received by proprietors
(b) rent, interest and profit of an enterprise
(c) combined factor payments which are not distinguishable
(d) wages due to family workers
Ans: (c)

7. Demand for final consumption arises in ——————-.
(a) household sector only
(b) government sector only
(c) both household and government sectors
(d) neither in households nor in government sector
Ans: (c)

8. Demand for intermediate consumption arises in—————— .
(a) consumer households
(b) government enterprises only
(c) corporate enterprises only
(d) all producing sectors of an economy
Ans: (d)

9. Which one of the following options is an economic activity?
(a) Listening to music on the radio.
(b) Teaching one's own son at home.

(c) Medical facilities rendered by a charitable dispensary.

(d) A housewife doing household duties.

Ans: (c)

10. Net value added is equal to—————— .

(a) payments accruing to factors of production

(b) compensation to employees

(c) wages plus rents

(d) value of output minus depreciation

Ans: (a)

11. Per capita national income means:

(a) NNP/population

(b) Total capital population

(c) Population NNP

(d) None of them

Ans: (a)

12. Which one of the following statements is correct?

(a) If national income rises, per capita income must also rise

(b) If population rises, per capita income must fall.

(c) If national income rises, welfare of the people must rise.

(d) None of them

Ans: (d)

III. SHORT ANSWER TYPE QUESTIONS (3-4 Marks)

1. Distinguish between domestic product and national product. When can domestic product be more than national product? [CBSE (AI) 2009]

OR

Differentiate between Domestic Income (NDPFC) Vs National Income (NNPFC).

Ans:

Domestic Income	Basis	National Income
It is a territorial concept as it includes the value of final goods and services produced within domestic territory of a country.	**Nature of Concept**	It is a national concept as it includes the value of final goods and services produced in the entire world.
It considers all producers within the domestic territory of the country.	**Category of Producers**	It considers all producers who are normal residents of the country.
It does not include NFIA.	**NFIA**	It includes NFIA.

Domestic product will be greater than national product when net factor income from abroad is negative.

2. Differentiate between Gross Domestic Product at Market Price Vs National Income.

Ans:

Gross Domestic Product at Market Price (GDP_{MP})	Basis	National Income (NNP_{FC})
It is a territorial concept as it includes value of final goods and services produced within the domestic territory of a country.	**Nature of Concept**	It is a national concept as it includes the value of final goods and services produced in the entire world.
It considers all the producers within the domestic territory of the country.	**Category of Producers**	It considers the producers who are normal residents of the country.
It is at market price, *i.e.*, it includes net indirect taxes.	**Net Indirect taxes**	It is at factor cost *i.e.*, it excludes net indirect taxes.
It is inclusive of depreciation.	**Depreciation**	It does not include depreciation.

3. Differentiate between National Income at constant price and national income at current price?

Ans:

NY at constant price	Basis	NY at current price
NY calculated on the basis of base year price index.	**Meaning**	NY calculated on the basis of current year price index.
Fluctuates due to the fluctuation in the flow of goods and services price remains constant.	**Fluctuation**	Fluctuates due to the fluctuation in the flow of goods and services along with the price.
Also called Real NY	**Nature**	Also called Monetary NY
It's a real indicator of economic growth.	**Economic Growth**	It's not a real indicator of economic growth.

4. Distinguish between real and nominal gross domestic product.[CBSE(AI) 2010]

Or

Discuss any two differences between GDP at constant prices and GDP at current Prices. [CBSE Sample Paper 2016]

Ans:

Real GDP	Basis	Nominal GDP
GDP calculated on the basis of base year price index.	**Meaning**	GDP calculated on the basis of current year price index.
Fluctuates due to the fluctuation in the flow of goods and services price remains constant.	**Fluctuation**	Fluctuates due to the fluctuation in the flow of goods and services along with the price.
It is calculated at constant prices.	**Calculated**	It is calculated at current prices.
It's a real indicator of economic growth.	**Economic Growth**	It's not a real indicator of economic growth.

5. Explain how 'externalities' are a limitation of taking gross domestic product as an index of welfare. [CBSE Foreign 2011]

Ans:

1. When the activities of somebody result in benefits or harms to others with no payment received for the benefit and no payment made for the harm done, such benefits and harms are called externalities.
2. Activities resulting in benefits to others are positive externalities and increase welfare; and those resulting in harm to others are called negative externalities, and thus decrease welfare.
3. GDP does not take into account these externalities.
4. For example, construction of a flyover or a highway reduces transport cost and journey time of its users who have not contributed anything towards its cost. Expenditure on construction is included in GDP but not the positive externalities flowing from it. GDP and positive externalities both increase welfare. Therefore, taking only GDP as an index of welfare understates welfare. It means that welfare is much more than it is indicated by GDP.
5. Similarly, GDP also does not take into account negative externalities. For examples, factories produce goods but at the same time create pollution of water and air. River Yamuna, now a drain, is a living example. The pollution harms people. The factories are not required to pay anything for harming people. Producing goods increases welfare but creating pollution reduces welfare. Therefore, taking only GDP as an index of welfare overstates welfare. In this case, welfare is much less than indicated by GDP.

6. Explain how "Non-Monetaiy exchanges' are a limitation in taking gross domestic product as an index of welfare.[CBSE(AI) 2011]

Ans:

1. There are many goods and services which are left out of estimation of national income on account of practical estimation difficulties e.g., services of housewives and other members, own account production, etc.
2. These are left on account of non¬' availability of data and problem in valuation.
3. It is generally agreed that these items contribute to economic welfare.
4. So, if we depend only on GDP, we would be underestimating economic welfare.

7. Explain how distribution of 'Gross Domestic Product' is a limitation in taking gross domestic product as an index of welfare.[CBSE Delhi 2010, 2011]

Ans:

1. All people do not earn the same amount of income. Some earn more and some earn

less. In other words, there is unequal distribution of income.
2. At the same time, it is also true that in the event of rise in 'per capita real income' all are not better off equally. 'Per capita' is only an average. Income of some may rise by less and of some by more than the national average. In case of some it may even fall.
3. It means that the inequality in the distribution of income may increase or decrease.
4. If it increase it implies that rich become more rich and the poor become more poor.
5. Utility of a rupee of income to the poor is more than to the rich. Suppose, the income of the poor declines by one rupee and that of the rich increases by one rupee. In such a case, the decline in welfare of the poor will be more than the increase in welfare of the rich.
6. Therefore, if the rise in per capita real income inequality increases, it may lead to a decline in welfare (in the macro sense).

8. State the various components of the income method that are used to calculate national income.[CBSE Sample Paper 2014]
Ans:

1. **Compensation of employees:** The amount earned by employees from their employer, whether in cash or in kind or through any other social security scheme is known as compensation of employees.
2. **Operating Surplus:** It is the sum of income from property and income from entrepreneurship.
3. **Mixed Income:** Income of own account workers (like farmers, doctors, barbers, etc.) and unincorporated enterprises (like small shopkeepers, repair shops) is known as mixed income.
   Note: (i) To estimate amount of factor payments made by each producing unit.
   (ii) To add all factor incomes/payments within domestic territory to get domestic income, i.e., NDPFC.
   NDPFC = Compensation of employees + Operating Surplus + Mixed Income
4. **Net factor income from Abroad(NFIA):** NFIA is the difference between income earned by normal residents from rest of the world and similar payments made to Non residents within the domestic territory. Addition of NFIA to NDPFC to get NY, i.e., NNPpc.
   NNPFC = NDPFC + NFIA

9. Define double counting. How can the problem of double counting be avoided?
Ans: If a single transaction is recorded twice or more than twice in the calculation of national income, then it is known as double counting.
The problem of double counting is solved by value added method. Theoretically to avoid double counting there may be two alternative ways:

1. Final Product Approach
2. Value Added Approach

1. **Final Product Approach:** According to this, value of only final products, i.e. which go for final consumption or capital formation should be included. But in practical application of this approach double counting still creeps in as every producer treats the product he sells as final whereas the same might have been used as intermediate product by the buyer.
2. **Value Added Approach:** Value added method is most effective in avoiding double counting. According to this, instead of taking value of final goods, only value added at each stage of production by a producing unit is taken. Value added of a firm by subtracting intermediate consumption from value of output.

IV. TRUE OR FALSE

Giving reasons, state whether the following statements are true or false.

1. In a closed economy, gross national product is always equal to gross domestic product.

Ans: **True:** When net factor income from abroad is zero i.e., income from abroad is equal to income to abroad.

2. Gross investment can be equal to net investment.

Ans: **True:** It is possible when depreciation is zero.

3. Domestic Income of a country can be more than its National income.

Ans: **True:** It can happen when NFIA is negative i.e., factor income paid to abroad is more than factor income received from abroad.

4. Market price is always more than factor cost.

Ans: **False:** Market price can be less than factor cost if net indirect taxes (NIT) are negative. Market price can also be equal to factor cost if NIT is zero.

5. Measurement of national income at current prices provides a reliable base of comparison.

Ans: **False:** National Income at 'Constant Prices' provides a reliable base of comparison.

6. Nominal GDP can never be less than Real GDP.[CBSE Sample Paper 2010]

Ans: **False:** Nominal GDP can be less than real GDP, if prices in the current year are less than the prices in the base year.

7. Net capital gains from the sale of property is a part of domestic factor income.

Ans: **False:** It is not a part of domestic factor income. It is. a sale of property and not of factors.

8. Change in stock is not a part of Capital formation.

Ans: **False:** Change in stock is a part of domestic capital formation.

9. Brokerage paid on sale of shares and income from shares purchased is not a part of national income.

Ans: **False:** Brokerage paid on sale of shares or any other item is a part of national income.

10. Salary of Pakistan worker, working in Indian Embassy is not a national income of India.

Ans: **True:** It is an expenditure made by- Indian Embassy. It is a part of Indian domestic income.

11. Income tax paid is not a part of national income.

Ans: **False:** Income tax paid is part of national income. It is included in profit and individual income.

12. Income from imputed rent of self- occupied houses is a part of national income.

Ans: **True:** It is an estimated amount of . rent. If rented to any other person, he would receive the amount of rent.

13. Net profit of any Bank of India's branch in USA will not be included in Indian National income.

Ans: **False:** Net profit of any Bank of India at USA branch is a part of national income of India.

14. Exports do not form a part of domestic factor income.

Ans: **False:** Exports are made from domestic production. It is a part of domestic factor income.

15. Gross domestic product at market price includes net factor income from abroad and net indirect taxes.

Ans: False: GDPMP does not include net factor income from abroad but includes net indirect taxes.

16. Gross National Product is always less than Gross National expenditure.

Ans: False: Gross national product is always equal to gross national expenditure.

17. Exports are a part of net factor income from abroad.

Ans: False: Exports are a part of domestic income. Exports are sent from home production.

18. Real GDP includes domestic income at current prices.

Ans: False: Real GDP is taken at some constant prices. It does not have the influence of price fluctuations.

19. National disposable income includes current transfers income of government.

Ans: False: National income includes income of government sector in the form of receiving of taxes.

20. Private income does not include net factor income from abroad.

Ans: False: Private income is a national concept. It also includes net factor income from abroad.

21. Personal income does not include income from personal taxes.

Ans: False: Personal income includes personal taxes, but not corporate taxes.

22. Personal disposable income is equal to aggregate consumption and savings.

Ans: True: Personal disposable income can be disposed upon consumption and savings both.

23. Private income includes earned incomes of private sector from all sources.

Ans: False: Private income includes both earned income (factor income) as well as unearned income (transfer income) of private sector from all sources.

24. National disposable income is the disposable income of private sector.

Ans: False: It is the disposable income of the whole country (public sector and private sector).

25. Travelling allowance paid by employer is a part of national income.

Ans: False: Travelling allowances are paid by an employee and then recovered from employer. It is not a part of national income

26. Consumption of food grains by farmer himself is not a part of national output.

Ans: False: It is a part of domestic output. It is a part of national income.

27. Sale of second hand car is not included in national income.

Ans: True: It's original sale has already been included in national income of previous year. If done it will be case of double counting.

28. Rent received by an American from Reliance Industries with respect to building located in India will neither be included in national income nor in domestic income of India.

Ans: False: Such rent will be included in domestic income of India as building is located within the domestic territory of India

29. Purchase of car by a consumer is a part of gross domestic capital formation.
Ans: False: It is a part of private final consumption expenditure.

30. Goods produced for self-consumption will be included in national income.
Ans: True: Such goods contribute to the current output and their imputed value will be included in national income.

31. Gross domestic capital formation is always greater than gross fixed capital formation. [CBSE Sample Paper 2010]
Ans: False: Gross domestic capital formation can be less than gross fixed capital formation if change in stock is negative.
Note: As per CBSE guidelines, no marks will be given if reason to the answer is not explained.

V. LONG ANSWER TYPE QUESTIONS(6 Marks)

1. Calculate GNP at FC from the following data by

1. **income method, and**
2. **expenditure method. [CBSE 2002]**

	Particulars	(₹) In Crore
(i)	Wages and salaries	800
(ii)	Mixed income of self-employed	160
(iii)	Operating surplus	600
(iv)	Undistributed profit	150
(v)	Gross capital formation	330
(vi)	Change in stocks	25
(vii)	Net capital formation	300
(viii)	Employers' contribution to social security schemes	100
(ix)	Net factor income from abroad	(–)20
(x)	Exports	30
(xi)	Imports	60
(xii)	Private final consumption expenditure	1,000
(xiii)	Government final consumption expenditure	450
(xiv)	Net indirect taxes	60
(xv)	Compensation of employees paid by the government	75

Ans:

1. NDPFC = Compensation of employees (Wages and salaries + Employer's contribution towards social security scheme) + Operating Surplus + Mixed Income
   = [(i) + (viii)] + (iii) + (ii)
   = [800 + 100] + 600 + 160 = 900 + 600 + 160 = 1660 Crore GNPFC = NDPFC + Depriciation (Gross capital formation – Net capital Formation) + Net Factor Income from abroad = 1660 + [(H) – (nil) + (6c)]
   = 1660 + [330-300] + (-20)]
   = 1660 + 30 – 20 = 1670 Crore
2. GDPMP = Government final consumption expenditure (Public final consumption expenditure) + Private final consumption expenditure + Gross domestic Capital formation + Net export (Export – Import)
   = (xiii) + (xii) + (v) + [(x) – (xi)]

= 450 + 1000 + 330 + [30 – 60]

= 1750 Crore .

GNPFC = GDPMP + Net factor income from abroad – Net Indirect Tax = 1750 + (be) – (xiv)

= 1750 + (- 20) – 60 = 1750 – 20 – 60 = 1670 Crore

2.Calculate "Gross National Product at Factor Cost" from the following data by (a) Income method, and (b) Expenditure method:[CBSE 2009]

	Particulars	(₹) In Crore
(i)	Private final consumption expenditure	1,000
(ii)	Net domestic capital formation	200
(iii)	Profits	400
(iv)	Compensation of employees	800
(v)	Rent	250
(vi)	Government final consumption expenditure	500
(vii)	Consumption of fixed capital	60
(viii)	Interest	150
(ix)	Net current transfers from rest of the world	(–)80
(x)	Net factor income from abroad	(–)10
(xi)	Net exports	(–)20
(xii)	Net indirect taxes	80

Ans: NDPFC = Compensation of Employees + Operating Surplus(profit + Rent + Interest + Mixed Income

= (iv) +[(iii) + (v) + (viii)] + 0 = 800 + [400 + 250 + 150]

= 800 + 800 = 1600 Crore GNPFC = NDPFC + Depreciation (Consumption of fixed Capital) + Net factor Income from abroad = 1600 + (vii) + (x)

= 1600 + 60 + (-10) = 1650 Crore GDPMP = Government final consumption expenditure + Private final consumption expenditure + Gross domestic capital formation (Net domestic capital formation + consumption of fixed capital) + Net export = (x) + (i) + [(ii) + (vii)] + (xi)

= 500 + 1000 + [200 + 60] + (- 20)

= 500 + 1000 + 260 – 20 = 1740 Crore GNPFC = GDPMP + Net factor income from abroad – Net Indirect Tax

= 1740 + (x) – (xii)

= 1740 + (-10] – 80 = 1650 Crore

3. From the following data, calculate (a) Gross Domestic Product at Factor Cost and (b) Factor Income To Abroad:[CBSE 2010]

	Particulars	(₹) In Crore
(i)	Compensation of employees	800
(ii)	Profits	200
(iii)	Dividends	50
(iv)	Gross national product at market price	1,400
(v)	Rent	150
(vi)	Interest	100
(vii)	Gross domestic capital formation	300
(viii)	Net fixed capital formation	200
(ix)	Change in stock	50
(x)	Factor income from abroad	60
(xi)	Net indirect taxes	120

Ans: (a) NDPFC = Compensation of employees + Operating surplus (Profit + Rent + Interest) + Mixed income

= (i) + P) + (v) + M] + 0 = 800 + [200 + 150 + 100]

= 800 + 450 = 1250 Crore Note: Gross domestic capital formation = Net fixed capital formation + Depreciation + Change in stock (vii) = (viii) + Depreciation + (ix)

300 = 200 + Depreciation + 50 Depreciation = 300 – 250 = 50 GDPFC = NDPFC + Depriciation = 1250 + 50 = 1300 Crore (b) GNPMP = GDPFC + NFIA (Factor income from abroad – Factor income paid to abroad) + Net indirect tax (iv) = 1300 + [(x) – Factor income paid to abroad] + (xi)

1400 = 1300 + (60 – Factor income paid to abroad) + 120 1400 = 1480 – Factor income paid to abroad Factor income paid to abroad = 1480 – 1400 = 80 Crore

4. Calculate (a) Private Income and (b) Gross Domestic Product at Factor Cost: [CBSE 2013, C, Set-I]

	Particulars	(₹) in Arab
(i)	Miscellaneous receipts of government administrative departments	5
(ii)	Savings of non-departmental enterprises	3
(iii)	Savings of private corporate sector	10
(iv)	Direct tax paid by households	30
(v)	Net factor income to abroad	6
(vi)	Corporation tax	20
(vii)	Net current transfers from the rest of the world	4
(viii)	National debt interest	15
(ix)	Current transfers from government	8
(x)	Income from property and entrepreneurship accruing to the government administrative departments	12
(xi)	Personal disposable income	200
(xii)	Consumption of fixed capital	11

Ans: Personal Disposable Income = Personal income – Direct taxes paid by households – Miscellaneous receipts of government

(xi) = Personal Income – (iv) – (i)

200 = Personal income – 30 – 5 Personal Income = 235 Arab Private Income = Personal Income + Retained profits (Savings of private corporate sector) + Corporate Tax = 235 + (iii) + (ii)

= 235 + 10 + 20 = 265 Arab „ Private income = NNPFC – Income from Domestic Product Accruing to Public Sector (Income from Property and Entrepreneurship accruing to government Administrative Departments + Saving of Non Departmental Enterprises) + National Debt interest + Current transfers from Government + Net Current transfers from rest of the world ,

265 = NNPFC – [(x) + (ii)] + (viii) + (ix) + (vii)]

265 = NNPFC – (12 + 3) + 15 + 8 + 4

NNPFC = 265 + 15 – 27 = 253 Arab

GDPFC = NNPFC + Consumption of fixed capital – Net factor income from abroad

= 253 + (xii) – [-(v)]

= 253 + 11 + 6 = 270 Arab

5. Calculate (a) Private Income and (b) National Income:

	Particulars	(₹) in Arab
(i)	Personal disposable income	120
(ii)	Income from property and entrepreneurship accruing to the government administrative departments	5
(iii)	Miscellaneous receipts of government administrative departments	4
(iv)	Net current transfers from abroad	10
(v)	Direct tax paid by households	15
(vi)	Corporation tax	6
(vii)	Undistributed profits of private sector	3
(viii)	National debt interest	16
(ix)	Savings of non-departmental enterprises	15
(x)	Net factor income from abroad	1
(xi)	Current transfers from government	2

Ans: Personal Disposable Income =Personal Income – Direct Taxes paid by households – Miscellaneous receipts of Government

(i) = Personal Income -(v)- (iii)

120 = Personal income – 15 – 4 Personal Income =139 Arab (Billion) Private Income = Personal Income + Undistributed profits of private sector + Corporate Tax = 139 + (vii) + (vi) = 139 + 3 + 6 = 148 Arab Private income = NNPFC – Income from Domestic Product Accruing to Public Sector (Income from Property and Entrepreneurship accruing to Government Administrative Departments + Saving of Non-Departmental Enterprises) + National Debt interest + Current transfers from government + Net Current transfers from rest of the world

148 = NNPFC – [(ii) + (ix)] + (viii) + (xi) + (iv) ,

148 = NNPFC-(5+ 15) + 16 + 2+ 10

NNPFC = 148 + 20 – 28 = 140 Arab

6. Find out Gross National Product at Market price and Net National Disposable Income from the following:

Ans: GDPMP = Government final consumption expenditure+Private final consumption expenditure + Gross domestic Capital formation (Net domestic Fixed capital formation + consumption of fixed capital + Change in stocks (closing stock – opening Stock) + Net Export = (vi) + (ii) + {(ix) + (vii) + [(iv) – (i)]} + (-viii) = 300+ 1000+ {150+ 30 + [40-50]}+ (-20) = 300 + 1000 + 170 – 20 = 1450 Arab GNPMP = GDPMP + Net factor income from abroad = 1450 + (-v)

= 1450 +[- (-10)] = 1460 Arab NNPFC = GNPMP – consumption of fixed capital – net indirect tax = 1460 – (vii) – 0 = 1460 – 30 = 1430 Arab

NNDI = NNPFC + NIT + Net current transfer from rest of the world (abroad) = 1430 + 0 + (-iii) = 1430 + (-5) = 1425 Arab

VI. HIGHER ORDER THINKING SKILLS

1. Explain the components of NFIA.[3-4 Marks]

Ans: There are three components of NFIA.

1. **Net Compensation of Employees:** The net compensation of employees receivable from the rest of the world is equal to the difference between compensation of employees received by resident workers who are living temporarily abroad or are employed abroad , and similar payments made to non- residents workers that are temporarily staying or are employed within the domestic territory of the country.
2. **Met Income From Property and Entrepreneurship:** Net income from property and

entrepreneurship is equal to the difference between the income received by way of interest, rent and profits by the residents of a country and similar payments made to the rest of the world.

3. **Net Retained Earnings of Resident Companies Abroad:** Retained earnings refers to the undistributed profits of the companies. Resident companiesft.e. companies belonging to one country and working in the domestic territory of some other country) retain a part of their profits for further investment abroad. Likewise, foreign companies and their branches retain a part of their profits in the countries of their operation.

The difference between the retained earnings of resident companies located abroad and retained earnings of the foreign companies located in a country is equal to the net retained earnings from abroad.
Note: It must be noted that NFIA is zero in a closed economy as such economy does not deal with the rest of the world sector.

2. Differentiate between National income and Private income. [3-4 Marks]
Ans:

Private Income	Basis	National Income
Private income is the income that includes factor incomes and transfer incomes.	**Meaning**	National income is the income that includes factor incomes only.
It includes all types of income received by workers and enterprises in the private sector.	**Inclusion**	It includes income generated both in private and public sectors.
Interest on national debt is included in it.	**Interest on National Debt**	Interest on national debt not included in it.
Private Income = NDP_{FC} of Private Sector + NFIA + Interest on National Debt + Current transfers from Government + Net Current transfers from rest of the world.	**Formula**	**National Income (NNP_{FC})** = Domestic income (NDP_{FC}) + Net Factor income from abroad (NFIA).

VII. VALUE BASED QUESTIONS

1. Why do non market economic activities, like

1. Services of housewives
2. Voluntary services and
3. Leisure time activities

help in the flow of goods and services of a country. But why are these not included in the estimation of national income? [1 Mark]

Ans: They are not included in national income, because of non-availability of data and problem in measuring the proper monetary values of these services.
Value : Implication of knowledge.

2. The given set of prices which is used for finding out real per capita income, should change frequently. Why? [1 Mark]

Ans: If the given set of prices used for assessing real per capita income changes frequently, then virtually what we get is nominal per capita income and this defeats the purpose of using or calculating the real per capita income.

Value : Critical thinking

3. Why comparing the GDPs of various nations might not tell you which nation is better off? [1 Mark]

Ans: The well being of nation or standard of living of people is measured by per capita income (GDP / Total Population) and distribution pattern of income not only by GDP.

Value : Critical thinking

4. GDP Calculation do not directly include the social costs of environmental damages, for example, global warming, acid rain. Do you think these costs should be included in GDP? Why or Why not? [1 Mark]

Ans: Yes, because people's well-being is affected by these environmental damages. No, it is very difficult to assess real damages in monetary terms.

Value : Awareness about social cost of GDP.

5. GDP growth rate in India for the last few years is more than 6% but still more than 28% of population is lying below poverty line. Explain any two factors responsible for it. [1 Mark]

Ans: There are two factors,

1. Unequal distribution of GDP
2. Rise in price level Value : Social awareness

6. Should we take real per capita income as an index of economic welfare? If not, why? [1 Mark]

Ans: Real per capita income cannot be taken as an index of economic welfare because there are many items and transactions relating to national income that have no connection with real GDP such as production of defence goods. Also it does not take into account any transaction related to illegal activities, black money and production of services for self-consumption.

Value : Critical thinking

7. Rakesh pays Rs 1,000 towards premium on his full life policy with the LIC. Is this a part of compensation of employees? [1 Mark]

Ans: No, any contribution made by an employee himself to any insurance scheme is not a part of compensation to employee. Value: Analytic

8. How will you treat Rs 20,000 earned per month by Mr Rajesh against hiring out his bus to a neighboring school?[1 Mark]

Ans: Income earned by way of lease is rental income, and hence form part of operating surplus and is included in national income.

Value: Analytic