# National Income & Its Related Concepts

## 1 Mark Questions

**1. Give one example of 'externality' which reduces welfare of the people. (Delhi 2013)**

**Ans.** When the activities of one result in harm to others with no payment made for the harm done, such activities are called negative externalities, e.g. factories produce goods but at the same time creates water and air pollution. Production of goods increases welfare but at the same time pollution reduces the welfare

**2. What is Nominal Gross Domestic Product? (Delhi 2011)**

**Ans.** Nominal Gross Domestic Product refers to market value of the final goods and services produced within the domestic territory of a country during a financial year, as estimated using the current year prices. It is also called GDP at current price.

**3. What is meant by Real Gross Domestic Product? (Delhi 2011 c)**

**Ans.** Real Gross Domestic Product refers to market value of the final goods and services produced within the domestic territory of a country during a financial year, as estimated using the base year prices. It is also called GDP at constant price.

**4. Define domestic product. (All India 2011,2010)**

**Ans.** The value of all factor incomes generated during an accounting year within the domestic territory of a country is termed as domestic product or domestic income of a country.

**5. What is transfer payment? (All India 2011)**

**Ans.** Transfer payments are all those unilateral payments corresponding to which there is no value addition in the economy, e.g. gifts, donations, etc.

## 3 Mark Questions

**6. Define externalities. Give an example of negative externality. What is its impact on welfare? (Delhi 2014)**

**Ans.** Externalities refer to the benefits or harms a firm or an individual causes to another for which they are not paid.

Examples of negative externalities are:

(i) River pollution created by an oil refinery has disastrous effects on aquatic life.
(ii) It reduces the overall welfare of the society and creates negative externality.

**7. What are externalities? Give an example of a positive externality and its impact on welfare of the people. (All India 2014)**

**Ans.** Externalities refer to the benefits or harms a firm or an individual causes to another for which they are not paid. These externalities can be positive as well as negative. A positive externality exists when an individual or firm making a decision does not receive the full benefit of the decision, e.g. Immunisation prevents an individual from getting a disease, but has the positive effect of the individual not being able to spread the disease to other. It enhances the overall welfare of the society and creates positive externalities.

**8. Explain how 'non-monetary exchanges' are a limitation in taking domestic product as an index of welfare? (Foreign 2014; All India 2011)**

**Ans.** The non-monetary exchanges which take place in the informal sectors are not included in the calculation of GDP since money is not being used. For example, Service of a housewife, kitchen gardening, etc. This results in an under estimation of GDP. Hence, GDP calculated in the standard manner may not give us a clear indication of the productive activity and actual welfare of the country.

**9. Calculate Gross National Disposable Income from the following data (All India 2013)**

| S.No. | Contents | ₹ (in lakhs) |
|---|---|---|
| (i) | Net Domestic Product at Factor Cost | 3000 |
| (ii) | Indirect Taxes | 300 |
| (iii) | Net Current Transfers From Rest of the World | 250 |
| (iv) | Current Transfers From Government | 100 |
| (v) | Net Factor Income to Abroad | 150 |
| (vi) | Consumption of Fixed Capital | 200 |
| (vii) | Subsidies | 100 |

**Ans.** Gross National Disposable Income (GNDI) = Net Domestic Product at Factor Cost ($NDP_{FC}$)

+ Consumption of Fixed Capital
+ Net Indirect Taxes (Indirect Taxes – Subsidies)
– Net Factor Income to Abroad
+ Net Current Transfers from Rest of the World
GNDI = 3,000 + 200 + (300 – 100) – 150 + 250 = 3650-150
GNDI = Rs. 3500 lakh

**10.Calculate Net National Disposable Income from the following data (Delhi 2013)**

| S.No. | Contents | ₹ (in crores) |
|---|---|---|
| (i) | Gross Domestic Product at Market Price | 2000 |
| (ii) | Net Current Transfers to Rest of the World | (–) 200 |
| (iii) | Net Indirect Taxes | 150 |
| (iv) | Net Factor Income to Abroad | 60 |
| (v) | National Debt Interest | 70 |
| (vi) | Consumption of Fixed Capital | 200 |
| (vii) | Current Transfers From Government | 150 |

***Ans.*** Net National Disposable Income (NNDI)

= Gross Domestic Product at Market Price ($GDP_{MP}$)
– Net Factor Income to Abroad – Consumption of Fixed Capital
– Net Current Transfers to Rest of the World

NNDI = 2000 – 60 – 200 – (–200)
= 1740 + 200
= ₹ 1940 crore

**11. Explain how 'distribution of Gross Domestic Product' is a limitation in taking Gross Domestic Product as an index of welfare. (Delhi 2011)**

**Ans.** If the Gross Domestic Product of a country is rising sharply, it may not necessarily indicate the welfare. This is because the rise in GDP may be concentrated in the hands of few individuals or firms leading to increase inequality of income and wealth, i.e. the gap between the income of rich and poor widens which does not indicate increase in the welfare.

**12. How can externalities be a limitation of using Gross Domestic Product as an index of welfare? (Delhi 2011 c)**

**Ans.** Increase in Gross Domestic Product is due to increased economic activities like industrialisation and urbanisation. With increase industrialisation certain problems for society also increase like pollution of air, water and soil and deforestation. Urbanisation also results in housing problems, increase in road accidents, etc. On the whole welfare decreases and this decrease in welfare is ignored while calculation of GDP. So, we can say that externalities can be a limitation of using GDP as an index of welfare. .

**13. Give the meaning of factor income to abroad and factor income from abroad. Also give an example of each. (All India 2009)**

**Ans.** Factor income to abroad It is the income earned by a non-resident factor of production working in domestic market, e.g. the earnings of a person from Bangladesh who is-working in India is factor income to abroad.

Factor income from abroad It is the income earned by residents of a country from rest of the world, e.g. an Indian citizen working in US, earns his salary and this is treated as factor income from abroad.

**14. Distinguish between domestic product and national product. When can domestic product be more than the national product? (All India 2009)**

**Ans.** The sum total of all factor incomes generated or produced during an accounting year within the domestic territory of a country is termed as domestic income or domestic product of a country. On the other hand, the sum total of all factor incomes earned by the normal residents of a country, irrespective of the fact that in which part of the world this income is generated, during an accounting year is called National Income or national product of a country.

**National Product = Domestic Product + Net Factor Income from Abroad.**

If Net Factor Income from Abroad (i.e. income paid to abroad is more than income received) is negative, the domestic product is more than the national product

**15. Calculate personal income (All India 2009)**

| S.No. | Contents | ₹ (in crores) |
|---|---|---|
| (i) | Retained Earnings of Private Corporations | 20 |
| (ii) | Miscellaneous Receipts of Government Administrative Departments | 50 |
| (iii) | Personal Disposable Income | 200 |
| (iv) | Personal Taxes | 30 |
| (v) | Corporate Profit Tax | 10 |

**Ans.** Personal Income = Personal Disposable Income + Personal Taxes + Miscellaneous Receipts of Government Administrative Departments (2)
= 200 + 30 + 50
= Rs. 280 crore

**16. Calculate personal income (All India 2009)**

| S.No. | Contents | ₹ (in crores) |
|---|---|---|
| (i) | Corporate Profit Tax | 10 |
| (ii) | Retained Earnings of Private Corporations | 20 |
| (iii) | Personal Tax | 40 |
| (iv) | Miscellaneous Receipts of Government Administrative Departments | 50 |
| (v) | Personal Disposable Income | 200 |

**Ans.** Personal Income = Personal Disposable Income + Personal Tax + Miscellaneous Receipts of Government Administrative Departments = 200 + 40 + 50 = Rs. 290 crore

**17.Calculate private income (Delhi 2009 c)**

| S.No. | Contents | ₹ (in crores) |
|---|---|---|
| (i) | National Debt Interest | 10 |
| (ii) | Personal Disposable Income | 150 |
| (iii) | Personal Taxes | 50 |
| (iv) | Corporate Profit Tax | 25 |
| (v) | Retained Earnings of Private Corporations | 5 |

**Ans.** Private Income = Personal Disposable Income + Personal Taxes + Corporate Profit Tax + Retained Earnings of Private Corporations (2)
= 150 + 50 + 25+5
= Rs. 230 crore

**18. Calculate private income (Delhi 2009 c)**

| S.No. | Contents | ₹ (in crores) |
|---|---|---|
| (i) | Retained Earnings of Private Corporations | 5 |
| (ii) | National Debt Interest | 10 |
| (iii) | Corporate Profit Tax | 25 |
| (iv) | Personal Disposable Income | 150 |
| (v) | Personal Taxes | 60 |

**Ans.** Private Income = Personal Disposable Income + Personal Taxes + Corporate Profit Tax + Retained Earnings of Private Corporations
= 150 + 60 + 25 + 5
= Rs. 240 crore

## 4 Marks Questions

**19. Distinguish between Real Gross Domestic Product and Nominal Gross Domestic Product. Which of these is a better index of welfare of the people and why? (All India 2013)**
**or**
**Distinguish between Real and Nominal Gross Domestic Product. (All India 2010)**

**Ans**. (i) Nominal GDP is the market value of all final goods and services produced in a geographical region usually a country, on the other hand, Real GDP is a macroeconomic measure of the value of output, economically adjusted for price changes. The adjustment transforms the Nominal GDP into an index for quantity of total output.

(ii) Nominal values of GDP from different time periods can differ due to changes in quantities of goods and services and/or changes in general price levels. Values for Real GDP are adjusted for difference in price levels while figures for Nominal GDP are not adjusted.

Real GDP is a better index of welfare of the people, when Real GDP rises, flow of goods and services tends to rise, other things remaining constant. This means greater availability of goods per person, implying higher level of welfare.

**20. Calculate Gross National Disposable Income and personal income from the following data (All India 2010)**

| S.No. | Contents | ₹ (in crores) |
|---|---|---|
| (i) | Net Factor Income from Abroad | (–) 50 |
| (ii) | Net Indirect Taxes | 110 |
| (iii) | Current Transfers by Government | 40 |
| (iv) | Corporation Tax | 60 |
| (v) | Net Domestic Product at Factor Cost | 800 |
| (vi) | National Debt Interest | 80 |
| (vii) | Net Current Transfers to Abroad | 10 |
| (viii) | Consumption of Fixed Capital | 50 |
| (ix) | Domestic Product Accruing to Government | 70 |
| (x) | Retained Earnings of Private Corporations | 10 |

**Ans.** Gross National Disposable Income = Net Domestic Product at Factor Cost ($NDP_{FC}$) + Net Factor Income from Abroad + Net Indirect Taxes – Net Current Transfers to Abroad + Consumption of Fixed Capital

$= 800 + (-50) + 110 - 10 + 50$

$=$ ₹ 900 crore **(2)**

Personal Income

= Net Domestic Product at Factor Cost ($NDP_{FC}$) – Domestic Product Accruing to Government + Net Factor Income from Abroad + Current Transfers by Government – Net Current Transfers to Abroad + National Debt Interest – Corporation Tax – Retained Earnings of Private Corporations

$= 800 - 70 + (-50) + 40 - 10 + 80 - 60 - 10$

$= 920 - 200$

$=$ ₹ 720 crore **(2)**

**21. Calculate Net National Disposable Income and personal income from the following data (Delhi 2010 c)**

| S.No. | Contents | ₹ (in crores) |
|---|---|---|
| (i) | Personal Tax | 212 |
| (ii) | Net National Product at Factor Cost | 2500 |
| (iii) | Net Indirect Taxes | 180 |
| (iv) | Domestic Product Accruing to Government | 500 |
| (v) | Retained Earnings of Private Corporations | 80 |
| (vi) | Net Factor Income From Abroad | 23 |
| (vii) | National Debt Interest | 100 |
| (viii) | Net Current Transfers From Abroad | 20 |
| (ix) | Corporation Tax | 70 |
| (x) | Current Transfers From Government | 30 |

**Ans.** Net National Disposable Income = $NNP_{FC}$ + Net Indirect Taxes + Net Current Transfers from Abroad

$= 2500 + 180 + 20$

$=$ ₹ 2700 crore **(2)**

Personal Income = $NNP_{FC}$ – Domestic Product Accruing to Government + Net Current Transfers from Abroad + Current Transfers from Government + National Debt Interest – Corporation Tax – Retained Earnings of Private Corporations

$= 2500 - 500 + 100 + 20 + 30 - 80 - 70$

$=$ ₹ 2000 crore **(2)**

**22. Calculate 'Gross National Disposable Income' and 'personal disposable income' from the following data (Delhi 2010 c)**

| S.No. | Contents | ₹ (in crores) |
|---|---|---|
| (i) | Consumption of Fixed Capital | 100 |
| (ii) | Net National Product at Market Price | 800 |
| (iii) | Domestic Product Accruing to Government | 80 |
| (iv) | Net Factor Income From Abroad | 50 |
| (v) | Net Current Transfers to Abroad | 50 |
| (vi) | National Debt Interest | 75 |
| (vii) | Personal Tax | 90 |
| (viii) | Corporation Tax | 60 |
| (ix) | Net Indirect Taxes | 120 |
| (x) | Current Transfers by Government | 25 |

***Ans.*** Gross National Disposable Income

= $NNP_{MP}$ + Consumption of Fixed Capital – Net Current Transfers to Abroad

= 800 + 100 – 50 = ₹ 850 crore **(2)**

Personal Disposable Income

= $NNP_{MP}$ – Domestic Product Accruing to Government – Net Indirect Taxes + Current Transfers by Government – Net Current Transfers to Abroad + National Debt Interest – Corporation Tax – Personal Tax

= 800 – 80 – 120 + 25 – 50 + 75 – 60 – 90

= 900 – 400 = ₹ 500 crore **(2)**

**23. Explain why subsidies are added to and indirect taxes deducted from domestic product at market price to arrive at domestic product at factor cost? (Delhi 2010 c)**

**Ans.** Subsidies by government are grants that decrease the price of a commodity, whereas indirect taxes are paid by a firm and households that increase the final price of a commodity. Hence, to derive Gross Domestic Product at Factor Cost from Gross Domestic Product at Market Price, we deduct indirect taxes and add subsidies. Also subsidies are the income received while indirect taxes are paid.

**24. Calculate Net National Disposable Income and personal disposable income from the following data (All India 2010 c)**

| S.No. | Contents | ₹ (in crores) |
|---|---|---|
| (i) | Net Factor Income to Abroad | 50 |
| (ii) | Current Transfers by Government | 30 |
| (iii) | Corporation Tax | 60 |
| (iv) | Net Current Transfers From Abroad | (–) 20 |
| (v) | Undistributed Profits of Private Organisations | 10 |
| (vi) | Net Domestic Product at Factor Cost | 1020 |
| (vii) | National Debt Interest | 40 |
| (viii) | Personal Tax | 70 |
| (ix) | Domestic Product Accruing to Government | 200 |
| (x) | Indirect Taxes | 100 |

***Ans.*** Net National Disposable Income $= NDP_{FC}$ – Net Factor Income to Abroad + Indirect Taxes + Net Current Transfers from Abroad

$= 1020 - 50 + 100 + (-20)$

$= 1050$ crore **(2)**

Personal Disposable Income

$= NDP_{FC}$ – Domestic Product Accruing to Government

– Net Factor Income to Abroad + Current Transfers by Government

+ Net Current Transfers from Abroad + National Debt Interest

– Corporation Tax – Undistributed Profits of Private Organisations

– Personal Tax **(2)**

$= 1020 - 200 - 50 + 30 + (-20) + 40 - 60 - 10 - 70$

$=$ ₹ 680 crore

## 6 Marks Questions

**25. Calculate**
**(i) Net National Product at Factor Cost and**
**(ii) Gross National Disposable Income from the following data (Delhi 2010)**

| S.No. | Contents | ₹ (in crores) |
|---|---|---|
| (i) | Savings of Non-departmental Enterprises | 50 |
| (ii) | Income From Property and Entrepreneurship Accruing to the Government Administrative Departments | 70 |
| (iii) | Personal Tax | 90 |
| (iv) | National Debt interest | 20 |
| (v) | Retained Earnings of Private Corporate Sector | 10 |
| (vi) | Current Transfer Payments by Government | 40 |
| (vii) | Consumption of Fixed Capital | 60 |
| (viii) | Corporation Tax | 30 |
| (ix) | Net Indirect Tax | 80 |
| (x) | Net Current Transfers from Rest of the World | (–) 10 |
| (xi) | Personal Disposable Income | 1000 |
| (xii) | Net Factor Income to Abroad | (–) 10 |

**Ans.** Income Accruing to Private Sector
= Personal Disposable Income + Personal Tax + Retained Earnings of Private Corporate Sector + Corporation Tax – National Debt Interest – Current Transfer Payments by Government – Net Current Transfers from Rest of the World + Net Factor Income to Abroad
= 1000 + 90 +10 + 30 – 20-40-(-10)+(-10)
= Rs. 1070 crore

$NDP_{FC}$ = Income Accruing to Private Sector+ Saving of Non-departmental Enterprises + Income from Property and Entrepreneurship Accruing to the Government Administrative Departments .
= 1070 + 50 + 70
= Rs. 1190 crore

(*i*) $NNP_{FC} = NDP_{FC} -$ Net Factor Income to Abroad
$= 1190 - (-10)$
$=$ ₹ 1200 crore **(4)**

(*ii*) Gross National Disposable Income $= NNP_{FC}$ + Net Indirect Tax + Net Current Transfers from Rest of the World + Depreciation
$= 1200 + 80 + (-10) + 60$
$=$ ₹ 1330 crore **(2)**

**26. Calculate**
**(i) Net National Product at Factor Cost and**
**(ii) Gross National Disposable Income from the following data (Delhi 2010)**

| S.No. | Contents | ₹ (in crores) |
|---|---|---|
| (*i*) | Net Current Transfers to Rest of the World | 10 |
| (*ii*) | Savings of Non-departmental Enterprises | 60 |
| (*iii*) | Net Indirect Tax | 90 |
| (*iv*) | Income from Property and Entrepreneurship Accruing to the Government Administrative Departments | 80 |
| (*v*) | Consumption of Fixed Capital | 70 |
| (*vi*) | Personal Tax | 100 |
| (*vii*) | Corporation Tax | 40 |
| (*viii*) | National Debt Interest | 30 |
| (*ix*) | Current Transfer Payments by Government | 50 |
| (*x*) | Retained Earnings of Private Corporate Sector | 10 |
| (*xi*) | Personal Disposable Income | 1100 |

**Ans.** (*i*) Net National Product at Factor Cost ($NNP_{FC}$)

= Personal Disposable Income + Personal Tax + Corporation Tax + Retained Earnings of Private Corporate Sector – Current Transfers Payments by Government – National Debt Interest + Net Current Transfers to the Rest of the World + Savings of Non departmental Enterprises + Income from Property and Entrepreneurship Accruing to the Government Administrative Departments

= 1100 + 100 + 40 + 10 – 50 – 30 + 10 + 60 + 80

= ₹ 1320 crore **(4)**

(*ii*) Gross National Disposable Income = $NNP_{FC}$ + Net Indirect Tax – Net Current Transfers to Rest of the World + Consumption of Fixed Capital

= 1320 + 90 – 10 + 70

= ₹ 1470 crore **(2)**