

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
 $GNDI = 3,000 + 200 + (300 - 100) - 150 + 250 = 3650 - 150$
 $GNDI = \text{Rs. } 3500 \text{ lakh}$

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

$$NNDI = 2000 - 60 - 200 - (-200)$$

$$= 1740 + 200$$

$$= ₹ 1940 \text{ crore}$$

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

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

$$= ₹ 900 \text{ crore} \quad (2)$$

Personal Income

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

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

$$= 920 - 200$$

$$= ₹ 720 \text{ crore} \quad (2)$$

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

$$= 2500 + 180 + 20$$

$$= ₹ 2700 \text{ crore} \quad (2)$$

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

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

$$= ₹ 2000 \text{ crore} \quad (2)$$

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

$$= \text{NNP}_{\text{MP}} + \text{Consumption of Fixed Capital} - \text{Net Current Transfers to Abroad}$$

$$= 800 + 100 - 50 = ₹ 850 \text{ crore}$$

(2)

Personal Disposable Income

$$= \text{NNP}_{\text{MP}} - \text{Domestic Product Accruing to Government} - \text{Net Indirect Taxes} + \text{Current Transfers by Government} - \text{Net Current Transfers to Abroad} + \text{National Debt Interest} - \text{Corporation Tax} - \text{Personal Tax}$$

$$= 800 - 80 - 120 + 25 - 50 + 75 - 60 - 90$$

$$= 900 - 400 = ₹ 500 \text{ crore}$$

(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) $NNP_{FC} = NDP_{FC} - \text{Net Factor Income to Abroad}$

$$= 1190 - (-10)$$

$$= ₹ 1200 \text{ crore}$$

(4)

(ii) Gross National Disposable Income = NNP_{FC} + Net Indirect Tax + Net Current Transfers from Rest of the World + Depreciation

$$= 1200 + 80 + (-10) + 60$$

$$= ₹ 1330 \text{ crore}$$

(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

$$= 1100 + 100 + 40 + 10 - 50 - 30 + 10 + 60 + 80$$

$$= ₹ 1320 \text{ crore}$$

(4)

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

$$= 1320 + 90 - 10 + 70$$

$$= ₹ 1470 \text{ crore}$$

(2)