QUESTIONS FOR PRACTICE SOLUTIONS

PART A: INTRODUCTORY MACROECONOMICS

Chapter-1: Introduction

1. Define macroeconomics.

Ans. Macroeconomics is defined as that branch of economics which studies economic problems or economic issues (like unemployment and poverty) at the level of an economy as a whole.

2. What is the difference between microeconomics and macroeconomics?

Ans. (*i*) Microeconomics studies economic issues or economic problems at the level of an individual– an individual firm, an individual household or an individual consumer. On the other hand, macroeconomics studies economic issues or economic problems at the level of the economy as a whole.

(*ii*) Allocation of resources to different uses is the central issue in microeconomics. On the other hand, determination of the level of output and employment is the central issue in macroeconomics.

(*iii*) There is a limited degree of aggregation in microeconomics. **Example:** We study output behaviour of an industry which is aggregate of all the firms producing a particular commodity. On the other hand, there is a larger degree of aggregation in macroeconomics. **Example:** We study national output which is aggregate of output of all the producing units in the economy.

3. List some important macroeconomic variables.

Ans. Aggregate demand, aggregate supply

4. Explain the significance of macroeconomics.

Ans. The significance of macroeconomics is highlighted through following points:

(*i*) Description of the Economy: Macroeconomics offers a deep description of the economy. For example, estimation of national income reveals the nature and level of economic activity in the economy.

(*ii*) Roadmap of Growth and Development: Macroeconomics offers a roadmap of growth and development. Programmes and policies of economic growth are drawn by assessing the needs and means of the economy.

(*iii*) Economic Stability: Study of macroeconomics helps achieve economic stability. This is achieved through appropriate monetary and fiscal/budgetary policies.

(*iv*) BoP (Balance of Payments) Status: Study of macroeconomics helps achieve BoP status of a country which reveals performance of the economy in relation to rest of the world.

(*v*) Problems of Poverty and Environmental Pollution: Macroeconomics offers insights into the problems of poverty and environmental pollution. It is by using macro-models that these problems are addressed.

(*vi*) Policy Formulation: Information relating to macroeconomic variables is extremely useful in the formulation of policies for the growth and development of the country.

5. What is the central issue in macroeconomics?

Ans. Determination of output and employment is the central issue of macroeconomics.

6. Throw light on the scope of macroeconomics.

Ans. Scope of macroeconomics means the area of study of macroeconomics. Macroeconomics largely deals with the following areas of study:

(*i*) **Estimation of National income and Related Aggregates:** Macroeconomics studies the concept of national income, its related aggregates and methods of its measurement.

(*ii*) **Theory of Employment:** Macroeconomics studies the theories related to employment and unemployment.

(*iii*) **Theory of Money:** Creation of money/credit by the commercial banks is an important component of macroeconomics. The role of Central Bank of a country (RBI in India) in regulating the supply of money in the economy is also studied under macroeconomics.

(*iv*) **Theory of General Price Level:** Determination of and changes in general price level are also studied under macroeconomics. Problems concerning inflation or general rise in prices and deflation or general fall in prices are also studied under macroeconomics.

(*v*) **Role of the Government (or Government Budget):** Macroeconomics studies how government budget impacts the level of economic activity in the economy.

(*vi*) **Exchange Rate and Balance of Payments:** Determination of exchange rate and the way it is managed in the international money market is also studies under the scope of macroeconomics.

7. "What is true at the micro level may not be true at macro level." Defend or refute the statement.

Ans. This statement is defended as what is true at micro level may not be true at macro level. This is called the micro-macro paradox. For instance, saving is a virtue at micro level but it is not considered good at macro level.

8. Why is saving not considered a virtue at macro level?

Ans. At the micro level, saving is a virtue. But it may be a vice at the macro level. If an individual saves more, he accumulates more wealth. It enhances his ability to earn more. But at the macro level, if everyone starts saving more, demand for goods and services may fall. It will adversely affect the inducement to invest. Consequently, the level of income and employment may shrink, pushing the economy into a state of depression.

Chapter-2: Some Basic Concepts of Macroeconomics

1. "All capital goods are producer goods, but all producer goods are not capital goods." Defend or refute the statement.

Ans. All capital goods are producer goods but all producer goods are not capital goods as:

(*i*) Capital goods include only fixed assets of the producers.

(*ii*) Single-use producer goods or raw material is also used by the producers in the production process.

2. What do we mean when we say that final goods have crossed the boundary line of production?

Ans. Production boundary is an imaginary line which distinguishes between goods on the basis of scope of value addition. The goods which have crossed the production boundary have no scope left for value addition and hence are called final goods.

3. What is meant by the problem of double counting? Discuss with the help of an example.

Ans. The problem of double counting refers to the problem of counting the value of an item more than once. For instance:

Producer	Intermediate cost	Value added	Final good
Farmer	0	500	500
Mill owner	500	200	700
Baker	700	100	800

In the table given above if we estimate income without subtracting the intermediate cost we would be over estimating our national income to be ₹ 2000. In order to resolve this problem a value added method or final product method is used.

4. "The same good may be final for one consumer but intermediate for the other." Comment.

Ans. This statement is defended as the nature of a good depends upon its end use, that is whether it can be categorised under final good or intermediate good depends upon its final use. For instance if a bread is purchased by a restaurant to make a sandwich which could be sold to the customers, it is an intermediate good but if the same bread is purchased by a household for direct satisfaction of wants then it is called a final good.

5. Distinguish between consumption goods and capital goods.

Ans.

Consumption Goods	Capital Goods
(*i*) Consumption goods lead to direct-satisfaction of human wants.	(*i*) Capital goods do not lead to direct-satisfaction of human wants.
(*ii*) These goods are consumed by the households when purchased.	(*ii*) These goods are not consumed by the households. Instead, these are used by the producers for further production.
(*iii*) Expenditure on consumption goods is called consumption expenditure.	(*iii*) Expenditure on capital goods is called investment expenditure.
(*iv*) Higher production of consumption goods leads to higher level of welfare of the people. It raises their quality of life.	(*iv*) Higher production of capital goods leads to higher production capacity in the economy. It is the backbone of GDP growth.

6. What is meant by fixed investment? State the significance of the same.

Ans. Fixed Investment is the increase in the stock of fixed assets (like plant and machinery) of the producers during an accounting year.

Following observations bring out the significance of fixed investment:

(*i*) It raises the production capacity of the producers.

(*ii*) It leads to higher level of output in the economy

(*iii*) It leads to GDP growth in the economy.

7. Which type of investment brings an addition to the stock of capital? State the reason for the same.

Ans. Fixed investment brings an addition to the stock of capital in terms of fixed assets (or capital goods) which are repeatedly used in the process of production for several years. It is also called fixed capital formation

8. Explain the concept of depreciation, its causes, ways of management.

Ans. Depreciation is the loss of value of fixed assets in use on account of: (*i*) normal wear and tear, (*ii*) accidental damages, and (*iii*) expected or foreseen obsolescence.

On the other hand, depreciation reserve fund is a provision of funds to cope with depreciation losses. These funds are used for the replacement of fixed assets when these are worn-out or when these become obsolete/outdated.

9. Distinguish between capital loss and depreciation.

Ans.

Consumption of Fixed Capital	Capital Loss
(*i*) Consumption of fixed capital refers to depreciation of fixed assets. It refers to loss of value of fixed assets while these are being used in the process of production.	(*i*) Capital loss is a loss of value of fixed assets when these are not being used.
(*ii*) It is a loss due to (*a*) normal wear and tear, (*b*) accidental damages, and (*c*) expected obsolescence.	(*ii*) It is a loss due to (*a*) natural calamities (earthquake, floods, fire, etc.), and (*b*) fall in the market value of the assets during periods of economic recession.
(*iii*) It is managed through depreciation reserve fund.	(*iii*) It is managed through insurance of the fixed assets.

10. How are stock variables different from flow variables?

Ans.

Stocks	Flows
(*i*) Stock is that quantity of an economic variable which is measured at a particular point of time.	(*i*) Flow is that quantity of an economic variable which is measured over a period of time.
(*ii*) Stock has no time dimension.	(*ii*) Flow has time dimension as per hour, per day, per month.
(*iii*) Stock is a static concept.	(*iii*) Flow is a dynamic concept.
(*iv*) **Examples:** Quantity of money, wealth.	(*iv*) **Examples:** Consumption, investment.

11. From a macro point of view the economy is divided into which four sectors? Explain each sector briefly.

Ans. From the macro point of view, economy is often divided into four sectors, *viz.*,

(1) Household Sector: It includes consumers of goods and services. Households are also the owners of the factors of production.

(2) Producer Sector: It includes all producing units (firms) in the economy. For the production of goods and services, the firms hire/purchase factors of production (land, labour, capital and entrepreneurial skill) from the households.

(3) Government Sector: It includes: (*i*) Government as a welfare agency, and (*ii*) Government as a producer. Government as a welfare agency performs such welfare functions as of law & order and defence.

(4) The External Sector (also called Rest of the World Sector): It includes all such activities which are related to export and import of goods, and the flow of capital between the domestic economy and rest of the world.

12. Explain the statement—"For every real flow there is a money flow."

Ans. The above listed statement is defended as:

(*i*) Corresponding to each real flow in one direction, there is a money/income flow from the opposite direction. **Example:** Corresponding to the flow of factor services (which is a real flow) from household to the producer sector, there is a flow of factor payments (which is a money flow) from producer to the household sector.

(*ii*) In a two sector economy, receipts of one sector are equal to payments made by other sector. In case receipts are less than the payments (or payments are less than the receipts), circularity is bound to stop at one point or the other.

13. Define circular flow of income and explain it with the help of a diagram.

Ans. Circular flow of income refers to the flow of goods and services across the four sectors of an economy. In a two sector economy, there are only two sectors of economic activity, namely households and firms. Households supply factor services to firms and firms hire factor services from households. Households spend their entire income on consumption. Firms sell what is produced to the households.

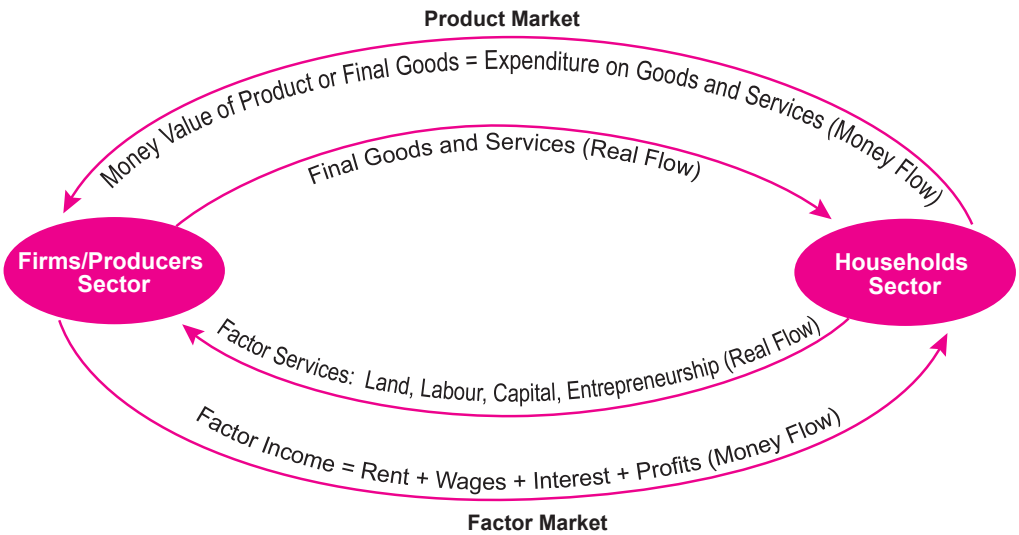
There are two types of markets:

Product market—market for goods and services.

Factor market—market for factors of production.

In this type of economy, circular flow can be explained with the help of following figure:

The Circular Flow of Income in a Two Sector Economy



As seen from the above diagram:

(*i*) Total production of goods and services by firms = Total consumption of goods and services

by household sector.

(*ii*) Factor payments by firms = Factor incomes of household sector.

(*iii*) Consumption expenditure of household sector = Income of household sector.

(*iv*) Thus, Real flows of production and consumption of firms and households = Money flows of income and expenditure of firms and households.

14. Enlist the three phases of circular flow of income.

Ans. The three phases of circular flow of income are as follows:

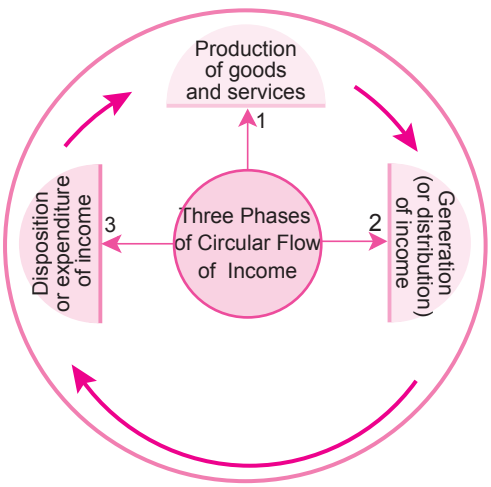
(*i*) **Phase of Production:** Production refers to 'value addition'. When wood worth ₹ 5,000 is converted into chairs worth ₹ 10,000, there is value addition worth ₹ 5,000 (= ₹ 10,000 – ₹ 5,000). This is what production means. Phase of production in the circular flow means the process of value addition by the producing sector.

(*ii*) **Phase of Income Generation (also called the Phase of Distribution):** For rendering their factor services to the producers, the households get factor payments: rent for land, interest for capital, wages/salaries for labour and profit for entrepreneurship

(*iii*) **Phase of Disposition/Expenditure:** Where does income go? It is spent or disposed of on the purchase of final goods and services. When households buy the final goods, there is consumption expenditure. When producers buy the final goods, there is investment expenditure. Thus, in phase-3, there is disposition (or expenditure) of income as a consequence of the generation of income in phase-2.

The figure below shows the three phases of circular flow in an economy.

Three Phases of Circular Flow



15. What is the significance of the circular flow model?

Ans. The below listed points suggest the significance of the circular flow model:

(*i*) **Estimation of National Income:** Circular flow model facilitates the estimation of national income. National income is the sum total of factor incomes (rent + profit + wages + interest) flowing from producers to households of a country. It may also be defined as the market value of the goods and services flowing from producers to other sectors of the economy. Further, it may be defined as the sum total of expenditure on the goods and services produced by the producer sector.

(*ii*) **Knowledge of Intersectoral Interdependence:** A circular flow model helps understand interdependence among different sectors of the economy. We learn how consumers are dependent on producers and vice versa.

Chapter-3: National Income and Related Aggregates

1. How are factor incomes different from transfer incomes?

Ans. Transfer incomes are those incomes which are received by a person as help, donation or charity, etc., whereas factor incomes are those incomes which are received by the factors of production by rendering their factor services.

2. Who is said to be the normal resident of a country?

Ans. Normal residents are those residents who ordinarily reside in the country concerned for atleast one year and whose centre of economic interest lies in that country.

3. What all is included in the domestic territory of a country?

Ans. Domestic territory of a country is the economic territory of a country in which economic activities of the country generate its domestic income.

4. How can we say that domestic product and domestic income are identical to each other?

Ans. The concepts of domestic product and domestic income are identical to each other because all production is ultimately converted into factor incomes.

5. Distinguish between domestic income and national income.

Ans.

Domestic Product (NDP_{FC})	National Product (NNP_{FC})
(*i*) Domestic product/income is the sum total of factor incomes generated within the domestic territory of a country.	(*i*) National product/income is the sum total of factor incomes generated by normal residents of a country, no matter where this income is generated (within the domestic territory or in rest of the world).
(*ii*) It includes income generated both by the residents as well as non-residents of a country.	(*ii*) It includes income generated only by the normal residents of a country.
(*iii*) It does not include net factor income from abroad.	(*iii*) It includes net factor income from abroad.
National Product = Domestic product + Net factor income from abroad	

6. State the difference between GDP at current prices and GDP at constant prices. Suggest which of the two measures is a better indicator of economic development.

Ans.

GDP at Current Prices	GDP at Constant Prices
(*i*) It is the market value of the final goods and services produced within the domestic territory of a country during an accounting year, as estimated at current year prices.	(*i*) It is the market value of the final goods and services produced within the domestic territory of a country during an accounting year, as estimated at base year prices.
(*ii*) It can increase if price level rises even when there is no increase in the flow of goods and services in the economy.	(*ii*) It can increase only when the flow of goods and services increase in the economy.
(*iii*) It is known as nominal GDP.	(*iii*) It is known as real GDP.
(*iv*) It is not a good measure of welfare of people.	(*iv*) It is a good measure of welfare of people.

As GDP at constant prices is adjusted for inflation hence we can say that it is a better indicator of economic development.

7. What is meant by GDP deflator? How is it calculated?

Ans. GDP Deflator is a measure of the level of prices of all new, domestically produced, final goods and services in an economy in a year.

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

8. What lowers the significance of GDP as an index of welfare?

Ans. When real GDP rises, flow of goods and services tends to rise. Other things remaining constant, this implies greater availability of goods per person, leading to higher level of welfare. But there are strong exceptions to this generalisation. Following observations/limitations may be noted in this context:

(*i*) **Distribution of GDP:** If with every increase in the level of GDP, distribution of GDP gets more unequal, welfare level of the society may not rise. In this situation, the bulk of the population may have even lesser goods than before (even when the overall level of GDP tends to rise).

(*ii*) **Composition of GDP:** Composition of GDP may not be welfare-oriented even when the level of GDP tends to rise. There is no direct increase in the welfare of the masses if GDP has risen owing largely to the increase in the production of defence goods.

(*iii*) **Non-monetary Exchanges:** In economies like of India, non-monetary transactions are quite evident in rural areas where payments for farm-labour are often made in kind rather than cash. Such transactions remain unrecorded. To that extent, GDP remains underestimated and is, therefore, not a proper index of welfare.

(*iv*) **Externalities:** Externalities refer to good or bad impact of an activity without paying the price or penalty for that. **Example:** Negative externalities occur when smoke omitted by factories causes air pollution. Environmental pollution causes a loss of social welfare. Impact of externalities is omitted in the estimation of GDP. To that extent, GDP is not an appropriate index of welfare.

9. State the method of converting nominal GDP to real GDP.

Ans. Given nominal GDP we can apply the below listed formula and estimate Real GDP.

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

10. What is meant by the term externalities? Explain the same with the help of suitable examples.

Ans. Externalities refer to the good or bad impact of an activity without paying the price or penalty for that. **Example:** Positive externalities occur when a beautiful garden maintained by Mr. X raises welfare of Mr. Y even when Mr. Y is not paying for it. There is no valuation of it in the estimation of GDP. Negative externalities occur when smoke omitted by factories causes air pollution, or the industrial waste is driven into rivers causing water pollution. Environmental pollution causes a loss of social welfare. But nobody is penalised for it and there is no valuation of it in the estimation of GDP. Impact of externalities (positive or negative) is not accounted in the index of social welfare in terms of GDP. To that extent, GDP as an index of welfare is not an appropriate index. It either underestimates or overestimates the level of welfare.

11. If the price index for the current year is 150 and GDP at current price is ₹ 1,50,000 crore. Estimate the value of GDP at constant price.

Ans. $$\text{National income at constant price} = \frac{\text{National Income and Current Price}}{\text{Current Price Index}} \times 100$$

If price index for the current year is 150 and national income at current price is ₹ 1,50,000 crore, then the national income at constant price will be:

$$= \frac{1,50,000}{150} \times 100$$

$$= ₹\ 1,00,000 \text{ crore.}$$

12. Estimate the value of GDP at constant prices for the year 2020, from the data given below:

Commodity	2010		2020	
	Price	Quantity	Price	Quantity
Wheat	10	1,000	12	1,000
Cloth	10	350	10	500
Milk	10	200	12	250

Ans.

Commodity	2010		2020		$P_0 Q_1$
	Price P_0	Quantity Q_0	Price P_1	Quantity Q_1	
Wheat	10	1,000	12	1,000	10,000
Cloth	10	350	10	500	5,000
Milk	10	200	12	250	2,500
					$\Sigma P_0 Q_1 = 17,500$

National income at constant prices $= P_0 \times Q_1$

$= ₹\ 17,500$

13. If Real GDP = ₹ 400 and Price Index (with base = 100) is 110. Calculate Nominal GDP.

Ans.

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

or

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

$$= \frac{400 \times 110}{100}$$

$$= ₹440$$

14. If nominal GDP is ₹ 15,000 and real GDP is ₹ 12,000, find the value of GDP Deflator.

Ans.

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

For example, if nominal GDP is ₹ 15,000 crore and real GDP is ₹ 12,000 crore, then

$$\text{GDP Deflator} = \frac{15,000}{12,000} \times 100$$

$$= ₹\ 125$$

Chapter-4: Methods of Calculating National Income

1. State the steps for calculating national income through value added method.

Ans. Value added method is that method which measures national income in terms of value addition by each producing enterprise in the economy during an accounting year.

Steps involved in Value Added Method: The following steps are taken while measuring national income with the help of value added method:

(*i*) First Step: It involves classification of productive enterprises into three categories, *viz.*, (*a*) Primary sector, (*b*) Secondary sector, and (*c*) Tertiary sector.

(*ii*) Second Step: Value of output (of a producing unit) is determined by multiplying the quantity of the product by its market price. Gross value added is estimated by deducting the intermediate consumption from the value of output. Depreciation is deducted from gross value added to get net value added.

(*iii*) Third Step: Net indirect taxes are deducted from net value added at market price to get net value added at factor cost which is equal to net domestic income. Net factor income from abroad is added to net domestic income to get national income.

2. Enlist a standard precaution related to the use of the value added method.

Ans. Following are some important precautions regarding value added method:

(*i*) Value of the sale and purchase of second-hand goods is not included in the estimation of 'value added' or GDP. Because, value of second-hand goods is already accounted for during the year they were produced.

(*ii*) Commission earned on account of the sale and purchase of second-hand goods is included in the estimation of value added. Because, commission is a reward for the services rendered.

(*iii*) Own account production of goods of the producing units is taken into account while estimating value added. Because, these goods are like those produced for the market. They are simply not sold owing to their need by the producers themselves. Example: Cars used by the car producers for transporting their employees.

(*iv*) Imputed value of production for self-consumption is taken into account. Again because, these goods are like those produced for the market. Example: Wheat produced and consumed by the farming families themselves.

(*v*) Value of intermediate goods is not included in the estimation of value added. Because, value of intermediate goods is reflected in the value of final goods.

(*vi*) Imputed rent on the owner occupied house is to be taken into account. Because, all houses have rental value, no matter these are self-occupied or rented out.

(*vii*) Services for self-consumption are not considered while estimating value added. Simply because, it is difficult to estimate their market value, like, for example, services of housewives.

3. What is meant by the problem of double counting? Suggest ways of avoiding the same.

Ans. The counting of the value of a commodity more than once is called the problem of double counting. This leads to overestimation of the value of goods and services produced. Thus, the importance of avoiding double counting lies in avoiding overestimating the value of domestic product.

For example, a farmer produces one ton of wheat and sells it for ₹ 400 in the market to a flour mill. The flour mill sells it for ₹ 600 to the baker. The baker sells the bread to the shopkeeper for ₹ 800. The shopkeeper sells the entire bread to the final consumers for ₹ 900. Thus,

Value of Output = ₹ 400 + ₹ 600 + ₹ 800 + ₹ 900 = ₹ 2,700

Under this approach, the value of the wheat is counted four times, the value of services of the miller thrice, and the value of services by the baker twice. In other words, the value of wheat and

value of services of the miller and of the baker have been counted more than once. The counting of the value of commodity more than once is called double counting.

To avoid the problem of double counting two methods are used: (*i*) Final Output Method, and (*ii*) Value Added Method.

(*i*) **Final Output Method:** According to this method, the value of intermediate goods is not considered. Only the value of final goods and services is considered. In the above example, the value of final goods, *i.e.*, bread is ₹ 900.

(*ii*) **Value Added Method:** Another method to avoid the problem of double counting is to estimate the total value added at each stage of production. In the above example, the value added at each stage of production is ₹ 400 + ₹ 200 + ₹ 200 + ₹ 100 = ₹ 900.

4. Enlist the components of compensation of employees.

Ans. It includes the following components:

(*i*) **Wages and Salaries in Cash:** It refers to cash paid or transferred to the salary account of the employees by the employers as a reward for the work done during the period of an accounting year.

(*ii*) **Payments in Kind:** It refers to benefits in kind (like rent-free accommodation) given to the employees by the employers.

(*iii*) **Employers' Contribution to Social Security:** It refers to such payments as provident fund contributions by the employers on behalf of the employees.

(*iv*) **Pension on Retirement:** To be specific, it does not refer to old-age pensions. It only refers to pension payments as a part of the 'Service-Contract' between the employer and the employees.

5. Suggest the major categories included in the final expenditure.

Ans. Expenditure method measures GDP_{MP} in terms of expenditure on the purchase of final goods and services produced in the economy during an accounting year. It includes the following components:

(*i*) **Private Final Consumption Expenditure (C_h):** It refers to expenditure on final goods and services by the individuals, households and non-profit private institutions serving society.

(*ii*) **Government Final Consumption Expenditure (C_g):** It refers to expenditure on final goods and services by the government, like expenditure on the purchase of goods for consumption by the defence personnel.

(*iii*) **Investment Expenditure (I):** It refers to expenditure on the purchase of final goods by the producers. These goods are to be further used in the process of production. This includes:

(*a*) expenditure on fixed assets, called fixed investment, and

(*b*) change in stocks called inventory investment.

(*iv*) **Net Exports (NE):** It is the difference between exports and imports during an accounting year.

$$C_h + C_g + I + NE = GDP_{MP}$$

GDP_{MP} is adjusted as under to find national income (NNP_{FC}):

GDP_{MP} – Depreciation – Net indirect taxes + Net factor income from abroad

= NNP_{FC} (National Income)

6. Why are export receipts not considered a part of net factor income from abroad?

Ans. (*i*) Export receipts refer to revenue of the firms from the sale of its output and hence are not a part of factor incomes (rent, interest, profits or wages).

(*ii*) These are to be included in GDP as these involve purchase of domestically produced goods by the rest of the world.

7. State some items which are a part of national income accounting under income method.

Ans. Examples of items which are a part of national income accounting under income method are:

(*i*) Commissions paid on the sale and purchase of second-hand goods are to be included in national income as these are a reward for rendering factor services.

(*iv*) Brokerage on the sale/purchase of shares and bonds is to be included in national income. Because this is a reward for factor services.

(*vi*) Imputed rent of owner occupied houses is to be treated along with rent as a component of factor incomes.

(*vii*) Corresponding to production for self-consumption, there should be generation of income in the economy. It should be taken account of.

8. Calculate GNP at MP from the following data:

Items	**(₹ in crore)**
(*i*) Compensation of employees	1,200
(*ii*) Consumption of fixed capital	100
(*iii*) Mixed income	500
(*iv*) Undistributed profits	30
(*v*) Corporation tax	150
(*vi*) Operating surplus	300
(*vii*) Net indirect tax	250
(*viii*) Net factor income to abroad	10

Ans. NDP_{FC} = Compensation of employees + Operating surplus + Mixed income

= ₹ 1,200 crore + ₹ 300 crore + ₹ 500 crore

= ₹ 2,000 crore

GNP_{MP} = NDP_{FC} + Depreciation + Net factor income to abroad + Net indirect tax

= ₹ 2,000 crore + ₹ 100 crore + (–) ₹ 10 crore + ₹ 250 crore

= ₹ 2,000 crore + ₹ 100 crore – ₹ 10 crore + ₹ 250 crore

= ₹ 2,340 crore

9. Given below is the data of a hypothetical economy, calculate National Income by Expenditure, Income, and Value Added Methods.

Items	**(₹ in crore)**
(*i*) Interest	40
(*ii*) Value of output:	
(*a*) Primary sector	1,000
(*b*) Secondary sector	500
(*c*) Tertiary sector	450
(*iii*) Compensation of employees	245
(*iv*) Net factor income from abroad	(–) 5
(*v*) Private final consumption expenditure	515
(*vi*) Intermediate cost:	
(*a*) Primary sector	630
(*b*) Secondary sector	310
(*c*) Tertiary sector	265
(*vii*) Rent and Royalty	25
(*viii*) Government final consumption expenditure	75

(*ix*)	Gross domestic fixed capital formation	130
(*x*)	Opening stock	40
(*xi*)	Profit	30
(*xii*)	Closing stock	70
(*xiii*)	Net exports	(–) 5
(*xiv*)	Net indirect taxes	80
(*xv*)	Consumption of fixed capital	40
(*xvi*)	Mixed income of self-employed	285

Ans. **(*a*) Value Added Method:**

Gross Value of Output

= Sales + Δ in stock

= Value of output of primary sector + Value of output of secondary sector + Value of output of tertiary sector

= ₹ 1,000 crore + ₹ 500 crore + ₹ 450 crore

= ₹ 1,950 crore

Gross Domestic Product at Market Price

= Gross value of output – Intermediate cost

= ₹ 1,950 crore – (₹ 630 crore + ₹ 310 crore + ₹ 265 crore)

= ₹ 1,950 crore – ₹ 1,250 crore

= ₹ 745 crore

Net National Product at Factor Cost

= Gross domestic product at market price – Depreciation + Net factor income from abroad – Net indirect taxes

= ₹ 745 crore – ₹ 40 crore + (–) ₹ 5 crore – ₹ 80 crore

= ₹ 745 crore – ₹ 40 crore – ₹ 5 crore – ₹ 80 crore

= ₹ 620 crore

(*b*) Income Method:

Net Domestic Product at Factor Cost

= Compensation of employees + OS + Mixed income of self-employed

= ₹ 245 crore + (₹ 25 crore + ₹ 40 crore + ₹ 30 crore) + ₹ 285 crore

= ₹ 245 crore + ₹ 95 crore + ₹ 285 crore

= ₹ 625 crore

Net National Product at Factor Cost

= Net domestic product at factor cost + Net factor income from abroad

= ₹ 625 crore + (–) ₹ 5 crore

= ₹ 620 crore

(*c*) Expenditure Method:

Gross Domestic Product at Market Price

= Government final consumption expenditure + Private final consumption expenditure + Gross domestic consumption formation + Net exports

= ₹ 75 crore + ₹ 515 crore + [₹ 130 crore + (₹ 70 crore – ₹ 40 crore)] + (–) ₹ 5 crore

= ₹ 75 crore + ₹ 515 crore + ₹ 160 crore – ₹ 5 crore

= ₹ 745 crore

Net National Product at Factor Cost

= Gross domestic product at market price – Depreciation + Net factor income from abroad – Net indirect taxes

= ₹ 745 crore – ₹ 40 crore + (–) ₹ 5 crore – ₹ 80 crore

= ₹ 745 crore – ₹ 40 crore – ₹ 5 crore – ₹ 80 crore

= ₹ 620 crore

10. Find out National Income from the following data:

Items	**(₹ in crore)**
(*i*) Factor income from abroad	15
(*ii*) Private final consumption expenditure	600
(*iii*) Consumption of fixed capital	50
(*iv*) Government final consumption expenditure	200
(*v*) Change in stock	(–) 10
(*vi*) Net domestic fixed capital formation	110
(*vii*) Net factor income to abroad	10
(*viii*) Net imports	(–) 20
(*ix*) Net indirect tax	70

Ans. GDP_{MP} = Government final consumption expenditure + Private final consumption expenditure + GDCG + Net exports

= ₹ 200 crore + ₹ 600 crore + [₹110 crore+ (– ₹ 10 crore) + ₹ 50 crore] + (–) ₹ 20 crore

= ₹ 200 crore + ₹ 600 crore + ₹ 150 crore – ₹ 20 crore

= ₹ 970 crore

NNP_{MP} = GDP_{MP} – Depreciation + Net factor income to abroad – Net indirect tax

= ₹ 970 crore – ₹ 50 crore + (– ₹ 10 crore) – ₹ 70 crore

= ₹ 840 crore

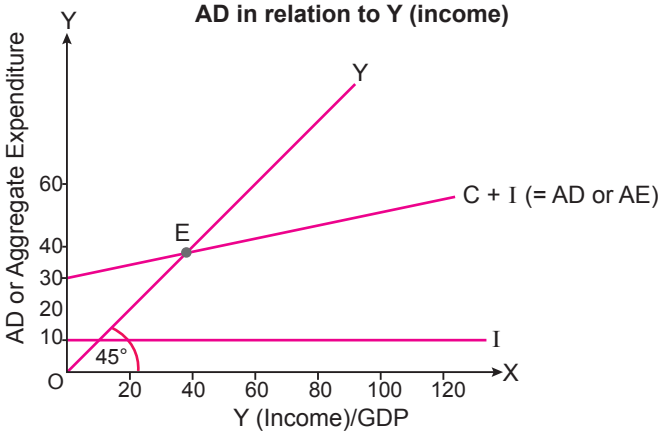
Chapter-5: Aggregate Demand, Aggregate Supply and Related Concepts

1. Explain the concept of aggregate demand with the help of a suitable table and diagram.

Ans. Aggregate demand is the sum total of expenditure that the people plan to incur on the purchase of goods and services produced in the economy (during the period of an accounting year) corresponding to different levels of income.

Table: AD Schedule showing relationship between AD and Y

Y	AD (= AE or Planned Expenditure)
0	30
20	35
40	40
60	45
80	50
100	55
120	60



2. Enlist the components of aggregate demand.

Ans. Aggregate demand refers to the total expenditure on the goods and services in an economy during the period of one year.

Components of aggregate demand in a two sector economy are as these:

(i) **Consumption Expenditure (C):** It is also called household consumption expenditure. It comprises demand for all goods and services by the households of a country during an accounting year. Generally, it depends on the level of personal disposable income. Higher the level of personal disposable income, higher is private consumption expenditure, and *vice versa*.

(ii) **Private Investment Expenditure:** It refers to expenditure by private investors on the purchase of such goods which add to their stock of capital. Investment, implying increase in the stock of capital, is also called capital formation. Rate of interest is the principal determinant of private investment. Higher rate of interest generally implies lower investment expenditure.

3. Why is there a proportionate rise in AS as and when there is any rise in AD?

Ans. According to the macroeconomic model as propounded by Keynes, price has no role to play as a determinant of AS. Owing to excess capacity in the economy, there is a proportionate rise in AS as and when there is any rise in AD which leads to a constant price level in the economy.

4. What is a consumption function? Explain the same with the help of a numerical example.

Ans. Consumption function refers to the functional relationship between consumption (C) and income (Y).

$$C = \overline{C} + bY$$

Table: Consumption Function: A Tabular Presentation

Y (₹)	C (₹)
0	20
50	60
100	100
150	140

For instance; Given that $\overline{C} = 20$, MPC = 0.8 and Y = 50 we can estimate the value of C *i.e.*, consumption by putting these values in the above mentioned consumption function *i.e.*,

$$C = \overline{C} + bY$$
$$C = 20 + 0.8(50)$$
$$C = 20 + 40$$
$$C = 60$$

5. State the relationship between MPC and MPS.

Ans. MPC is the ratio between additional consumption (ΔC) and additional income (ΔY). Likewise, MPS is the ratio between additional saving (ΔS) and additional income (ΔY).

$$MPC + MPS = 1$$

$$MPC = \frac{\Delta C}{\Delta Y} \text{ and } MPS = \frac{\Delta S}{\Delta Y}$$

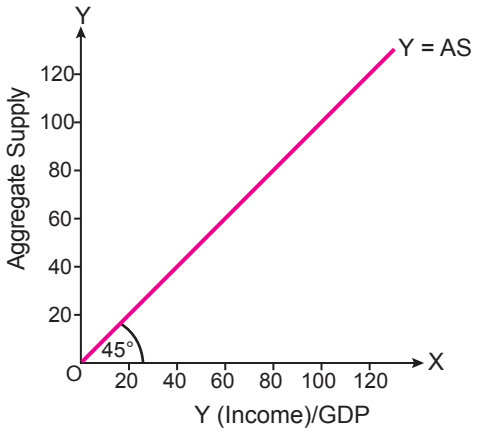
we know that, $\Delta C + \Delta S = \Delta Y$

i.e.,
$$MPC + MPS = \frac{\Delta C}{\Delta Y} + \frac{\Delta S}{\Delta Y}$$
$$= \frac{\Delta C + \Delta S}{\Delta Y} = \frac{\Delta Y}{\Delta Y} = 1$$

Hence, MPC + MPS = 1, always higher the MPC, lower is MPS and vice versa, this shows an inverse relationship between these variables.

6. Explain the curvature of the aggregate supply curve with the help of a suitable diagram.

Ans.



Aggregate supply curve shows the total supply in an economy at different price levels. Generally, the aggregate supply curve slopes upwards- that is a higher price level encourages firms to supply more. It is a 45° line shooting from the origen.

7. Can MPS or MPC ever be negative? Give reasons in support of your answer.

Ans. Neither MPC nor MPS can ever be negative. This is because MPC is the ratio between additional consumption (ΔC) and additional income (ΔY). Likewise, MPS is the ratio between additional saving (ΔS) and additional income (ΔY).

The ratio $\frac{\Delta C}{\Delta Y}$ refers to slope of C-function which is always positive (because of positive relationship between C and Y). Likewise, the ratio $\frac{\Delta S}{\Delta Y}$ refers to slope of S-function which is always positive (because of positive relationship between S and Y).

8. Complete the following table:

Income (₹)	Saving (₹)	Average Propensity to Consume	Marginal Propensity to Consume
0	–40		
50	–20	—	—
100	0	—	0.6
150	30	0.8	—
200	50	—	—

Ans.

Income (₹)	Saving (₹)	Average Propensity to Consume	Marginal Propensity to Consume
0	–40	—	—
50	–20	1.4	0.6
100	0	1	0.6
150	30	0.8	0.4
200	50	0.75	06

9. If national income is ₹ 50 and saving ₹ 5 crore, find out average propensity to consume. When income rises to ₹ 60 crore and saving to ₹ 9 crore, what will be the average propensity to consume and the marginal propensity to save?

Ans.

Income (Y) (₹)	Saving (S) (₹)	Average Propensity to Consume (APC)
50	5	0.90
60	9	0.85

$$MPS = \frac{\Delta S}{\Delta Y}$$

$$MPS = \frac{9 - 5}{60 - 50}$$

$$MPS = \frac{4}{10} = 0.40$$

10. Using the consumption function: $C = \overline{C} + bY$, calculate saving at income of ₹ 2,000 crore, if autonomous consumption is ₹ 150 crore and 40% of additional income is consumed.

Ans. Given,

$$Y = 2{,}000$$
$$\overline{C} = 150$$
$$MPC = 0.4$$
$$C = \overline{C} + b(Y)$$
$$C = 150 + 0.4(2{,}000)$$
$$= 950$$
$$Y = C + S$$
$$2{,}000 = 950 + S$$
$$S = ₹\ 1{,}050$$

11. If MPC is four times MPS and consumption at zero level of income is ₹ 70 crore, derive the consumption function.

Ans.

$$MPC = 4(MPS)$$
$$MPC + MPS = 1$$
$$0.8 + 0.2 = 1$$

0.8 is 4 times 0.2.

Given, $\overline{C} = 70$

$$C = \overline{C} + bY$$
$$C = 70 + 0.80(Y)$$

12. The consumption curve makes an intercept of ₹ 60 crore on the Y-axis. If MPC : MPS can be expressed as 1 : 3, then derive the saving and consumption function. Also determine the level of income, when saving becomes zero.

Ans. MPC : MPS

1 : 3

$$\frac{0.25}{0.75} = \frac{1}{3}$$

Given, $\overline{C} = 60$

$$C = \overline{C} + bY$$
$$= 60 + 0.25(Y)$$
$$S = -\overline{C} + (1 - b)Y$$
$$= -60 + 0.75(Y)$$

1. Why is there an equilibrium in the economy when AD = AS?

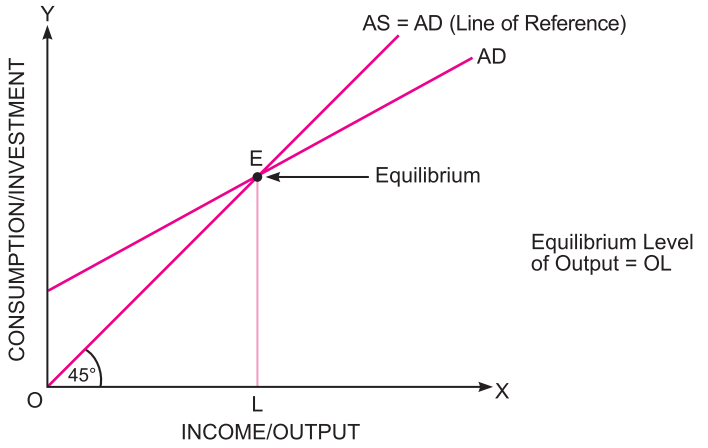
Ans. There exists an equilibrium in the economy when AD=AS because it is at this point where all that the producers wish to produce (or plan to produce) during the year is exactly equal to what the buyers wish to spend on the purchase of goods and services during the year.

2. Discuss short run equilibrium using AD = AS approach.

Ans. In an economy, equilibrium level of income and employment is determined when AD (aggregate demand) is equal to AS (aggregate supply).

According to Keynes, AS may be assumed to be perfectly elastic in an economy where full employment (of resources) is yet to be achieved. Accordingly, AD becomes the principal determinant of equilibrium level of income.

In the figure below AD represents aggregate demand curve and 45° line is the line of reference where AS = AD. Equilibrium level of income Y is determined at point E, where AD = AS.



The equality between AS and AD implies that the desired level of output in the economy (as indicated by AS) is exactly equal to the desired level of expenditure (as indicated by AD) in the economy. So that, the entire output as planned by the producers (during an accounting year) is purchased by the buyers. There are no undesired or unwanted inventories (stock of goods) with the producers.

When the economy is not in equilibrium:

(*i*) AD > AS, and (*ii*) AD < AS.

(*i*) If aggregate demand is greater than aggregate supply, *i.e.*, AD > AS, flow of goods and services in the economy tends to be less than their demand. The existing stocks of the producers would be sold out and the producers would suffer the loss of unfulfilled demand. To rebuild the desired stocks and avoid the loss of unfulfilled demand, the producers would plan greater production. AS would increase to become equal to AD. This is how AS converges with AD.

(*ii*) If aggregate demand is less than aggregate supply, *i.e.*, AD < AS, flow of goods and services in the economy tends to exceed their demand. As a result, some of the goods would remain unsold. To clear unwanted stocks, the producers would plan a cut in production. Consequently, AS would reduce to become equal to AD. This is how AS adapts itself to AD.

3. Explain the working of investment multiplier with the help of a suitable table and diagram.

Ans. Investment multiplier is the ratio of change in income to a given change in investment.

Multiplier can be calculated as follows:

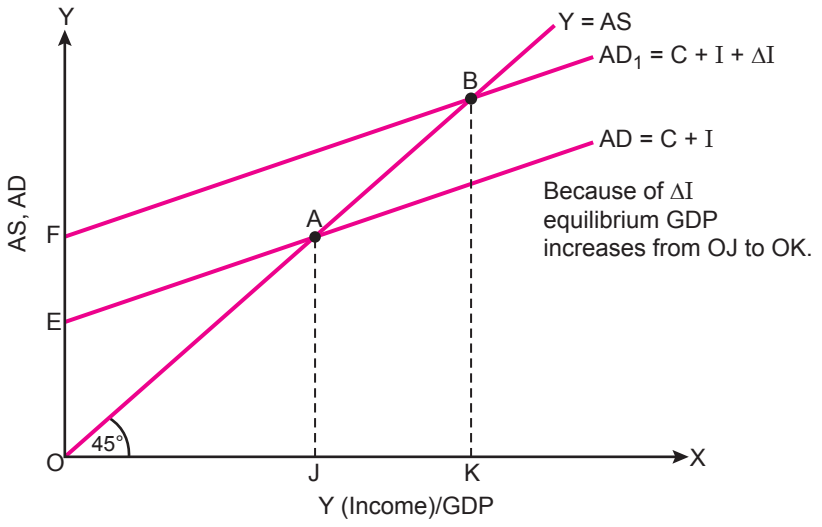
$$K = \frac{\Delta Y}{\Delta I} = \frac{1}{1 - MPC} = \frac{1}{MPS}$$

(Here, K = Multiplier; ΔY = Change in income; ΔI = Change in investment; MPC = Marginal propensity to consume; MPS = Marginal propensity to save.)

Thus, if Y = ₹ 40; Y_1 = ₹ 100; I = ₹ 10; I_1 = ₹ 40,

$$K = \frac{\Delta Y}{\Delta I} = \frac{100 - 40}{40 - 10} = \frac{60}{30} = 2.$$

Impact of Increase in Investment (ΔI) on Equilibrium GDP



4. If in an economy there is disequilibrium between planned investment and planned savings, how will this equality be achieved?

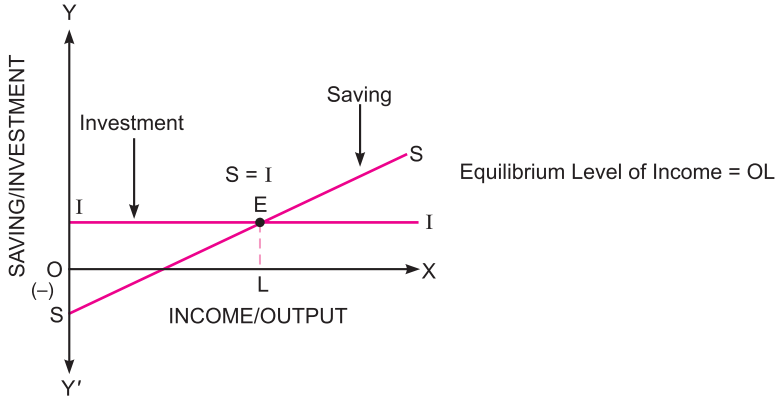
Ans. An economy is in equilibrium at a point where ex-ante or planned saving is equal to planned investment. This is because in equilibrium:

$$AS = AD$$

Or, $$C + S = C + I$$

Or, $$S = I$$

In the figure below the situation of equilibrium is experienced when S = I.



Equilibrium is struck at point E where S and I lines intersect each other. OL is the equilibrium level of income.

When the economy is not in equilibrium, two possibilities exist:

(*i*) S > I

In such a situation, the following changes will occur:

(*a*) Stocks of the producers would be in excess of the desired limit.

(*b*) Profits will start shrinking.

(*c*) Planned output for the subsequent year will fall.

(*d*) Level of income and employment will tend to shrink to the point where S = I. This corresponds to point E in the diagram.

Thus, the economy will come back to the state of equilibrium.

(*ii*) S < I

In such a situation, the following changes will occur:

(*a*) Existing stocks of the producers will not be enough to cope with the level of AD.

(*b*) Profits will not be maximum because the desired level of stock is not available.

(*c*) Producers will plan higher level of output for the subsequent years.

(*d*) Level of output and employment will rise to drive the economy to the point of equilibrium at point E.

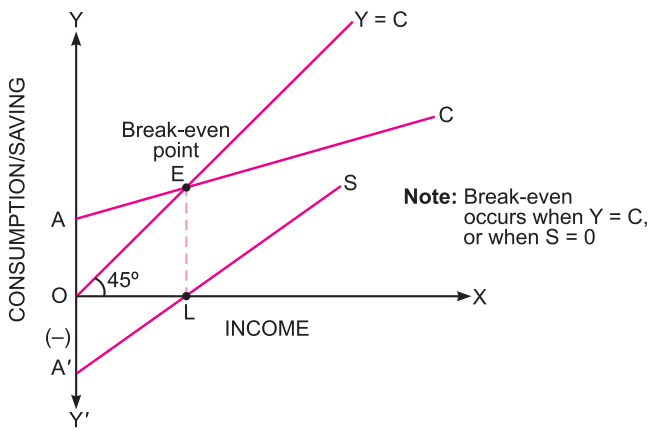
5. Distinguish between ex-ante and ex-post investment.

Ans.

Ex-ante investment	Ex-post investment
(*i*) Planned (or ex-ante) investment refers to the desired level of investment.	(*i*) Actual (or ex-post) investment refers to the realised level of investment.
(*ii*) In an accounting year, planned investment may or may not be equal to planned saving.	(*ii*) In an accounting year, actual investment is always equal to actual savings. (This is according to the principle of national income accounting.)
(*iii*) Equilibrium level of income is determined where planned investment = planned saving.	(*iii*) Actual investment has no relevance in the determination of equilibrium level of income.

6. Derive a straight line saving curve with the help of the consumption curve.

Ans. In the figure below C is the consumption curve and S is the saving curve. OA is the minimum consumption when income is zero and OA′ is negative saving when income is zero. At point E, consumption is equal to income and saving is equal to zero. This is called the break-even point.



7. An increase of ₹ 250 crore in investment in an economy resulted in a total increase in income of ₹ 1,000 crore. Calculate the following:

(*a*) Marginal propensity to consume (MPC).

(*b*) Change in savings.

(*c*) Change in consumption expenditure.

(*d*) Value of multiplier.

Ans. $$\text{Multiplier (k)} = \frac{\text{Change in income } (\Delta Y)}{\text{Change in investment } (\Delta I)}$$

$$= \frac{1,000}{250} = 4$$

We know, $$\text{Multiplier (k)} = \frac{1}{1 - \text{MPC}}$$

$$4 = \frac{1}{1 - \text{MPC}}$$

$$1 - \text{MPC} = \frac{1}{4}$$

Hence, $$\text{MPC} = 1 - 0.25 = 0.75$$

$$\text{MPC} = \frac{\text{Change in consumption } (\Delta C)}{\text{Change in income } (\Delta Y)}$$

$$0.75 = \frac{\text{Change in consumption } (\Delta C)}{1,000}$$

So, change in consumption expenditure (ΔC) = ₹ 750 crore.

Change in Saving = Change in income – Change in consumption expenditure

So, Change in Saving = ₹ 1,000 crore – ₹ 750 crore

= ₹ 250 crore

(*a*) Marginal propensity to consume (MPC) = 0.75

(*b*) Change in savings = ₹ 250 crore

(*c*) Change in consumption expenditure = ₹ 750 crore

(*d*) Value of multiplier = 4

8. An additional investment of ₹ 500 crore increases the income by ₹ 500 crore in the first round of the multiplier process, by ₹ 450 crore in the second round, by ₹ 405 crore in the third round and so on. Determine the total increase in income.

Ans. Increase of ₹ 450 crore in the second round and of ₹ 405 crore in the third round indicates that 90% of additional income is spent on consumption, *i.e.*, MPC = 0.90.

$$\text{Multiplier (k)} = \frac{1}{1 - \text{MPC}}$$

$$= \frac{1}{1 - 0.90} = \frac{1}{0.10} = 10$$

We also know, $$k = \frac{\text{Change in income } (\Delta Y)}{\text{Change in investment } (\Delta I)}$$

$$10 = \frac{\text{Change in income } (\Delta Y)}{500}$$

Change in income (ΔY) = ₹ 5,000 crore

Total increase in income = ₹ 5,000 crore

9. Given consumption function: C = 100 + 0.75Y (where C = consumption expenditure and Y = national income) and investment expenditure ₹ 1,000, calculate:

(*a*) Equilibrium level of national income.

(*b*) Consumption expenditure at equilibrium level of national income.

Ans. (*a*) Equilibrium level of national income (ΔY)

At equilibrium, $Y = C + I$

or, $Y = 100 + 0.75Y + 1,000$

$0.25Y = 1,100$

$Y = ₹\ 4,400$

(*b*) Consumption expenditure at equilibrium level of national income.

Putting value of national income of 4,400 in consumption function, we get

$C = 100 + 0.75 \times 4,400$

$C = ₹\ 3,400$

(*a*) Equilibrium level of national income = ₹ 4,400

(b) Consumption expenditure at equilibrium level of national income = ₹ 3,400

10. The saving function of an economy is S = –200 + 0.25Y. The economy is in equilibrium when income is equal to 2,000. Calculate:

(*a*) Investment expenditure at equilibrium level of income.

(*b*) Autonomous consumption.

(*c*) Investment multiplier.

Ans. (*a*) Investment expenditure at equilibrium level of income

Given, equilibrium level of income (Y) = 2,000

Putting value of Y in saving function, we get

$S = -200 + 0.25 \times 2,000$

$= 300$

At equilibrium, Planned Saving (S) = Planned Investment (I) . It means:

Investment expenditure (I) at equilibrium level of income = 300

(*b*) Autonomous consumption

We know, Consumption (C) + Saving (S)= Income (Y)

Autonomous consumption means the level of consumption expenditure when income is zero.

When Y = 0; Saving = – 200;

So, autonomous consumption = 200

(Alternately, autonomous consumption can also be calculated from the saving function. We know, Saving function is expressed as: S = – C + Y(1 – b). It means, – 200 indicates that autonomous consumption ($\overline{C}$) = 200).

(*c*) Investment multiplier.

From the saving function, we know that MPS= 0.25

$$\text{Investment Multiplier (k)} = \frac{1}{\text{MPS}} = \frac{1}{0.25} = 4$$

(*a*) Investment expenditure at equilibrium level of income = 300

(*b*) Autonomous consumption = 200

(*c*) Investment multiplier = 4

Chapter-7: Problem of Deficient Demand and Excess Demand

1. What is meant by full employment equilibrium?

Ans. (*i*) Full employment equilibrium refers to a situation where AD = AS and all those who are able to work and willing to work (at the existing wage rate) get work.

(*ii*) Full employment equilibrium corresponds to the highest possible level of output in the economy under the given circumstances.

(*iii*) Attempt to increase production beyond full employment equilibrium causes inflationary gap.

2. Distinguish between voluntary and involuntary unemployment.

Ans.

Voluntary Unemployment	Involuntary Unemployment
(*i*) Voluntary unemployment is a situation in which a worker is not willing to work at all, or are not willing to work at the current rate of wages.	(*i*) Involuntary unemployment is a situation in which a worker is willing to work at current rate of wages but does not get work.
(*ii*) Voluntary unemployment is not considered in the estimation of total unemployment in a country.	(*ii*) Involuntary unemployment is considered in the estimation of total unemployment in the economy

3. What is meant by the natural rate of unemployment?

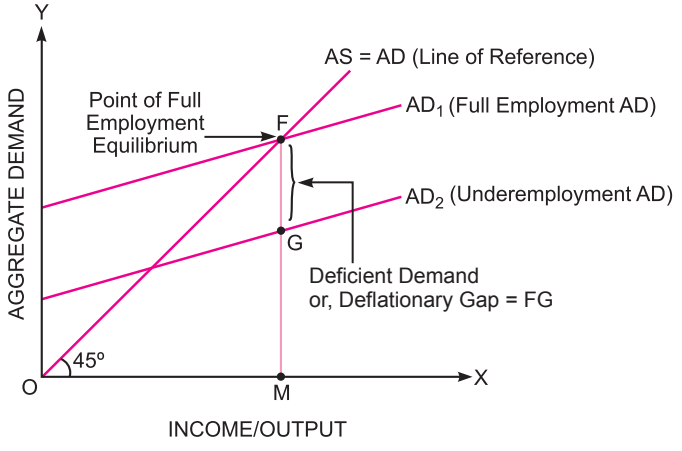
Ans. Natural rate of unemployment is the minimum unemployment rate resulting from real or voluntary economic forces. It reflects the number of people that are unemployed due to the structure of the labour force, such as those replaced by technology or those who lack certain skills to gain employment.

4. Explain the concept of excess demand with the help of a suitable diagram.

Ans. Deficient demand refers to a situation when AD < AS (corresponding to full employment level in the economy).

Accordingly, there is deflationary gap in the economy.

The figure below illustrates this situation.



Full employment level of demand is indicated by AD_1 (intersecting the 45° line at point F, the point of full employment equilibrium).

If demand level happens to be AD_2, the gap between AD_1 and AD_2 is equal to FG which is a situation of deficient demand.

5. Enlist the causes of deficient demand.

Ans. Causes of deficient demand:

(*i*) Reduction in private consumption expenditure.

(*ii*) Reduction in investment expenditure.

(*iii*) Reduction in government expenditure.

(*iv*) Decline in exports.

(*v*) Rise in imports.

(*vi*) Increase in tax burden.

6. What is meant by excess demand? How can it be corrected?

Ans. The problem of excess demand refers to a situation when AD > AS corresponding to full employment in the economy. The problem of excess demand can be corrected through the following measures:

(*i*) Public expenditure on public works, public welfare and public investment should be reduced. Reduction in public expenditure will lead to a fall in aggregate demand.

(*ii*) The direct and indirect taxes should be increased. It will lead to decrease in disposable income of the people and thereby bring a decrease in demand.

(*iii*) The repo rate should be increased. It will induce an increase in the market rate of interest. Consequently, demand for the funds for the purpose of consumption expenditure and investment expenditure will reduce. Implying a fall in aggregate demand.

7. Distinguish between inflationary gap and deflationary gap.

Ans.

Inflationary Gap	Deflationary Gap
(*i*) Inflationary gap is the excess of AD over and above its level required to maintain full employment equilibrium in the economy.	(*i*) Deflationary gap is the deficiency of AD required to maintain full employment equilibrium in the economy.
(*ii*) Inflationary gap occurs when AD > AS (corresponding to full employment level).	(*ii*) Deflationary gap occurs when AD < AS (corresponding to full employment level).
(*iii*) Inflationary gap points to a situation of rise in the general price level (owing to excess demand), without any rise in the level of output/employment in the economy.	(*iii*) Deflationary gap points to a situation of excess capacity in the economy. This implies that the factors of production are not fully utilised, leading to unemployment in the economy.

8. State the differences between monetary policy and fiscal policy.

Ans. Monetary policy refers to the activity of the central bank which is directed towards influencing the quantity of money and credit in the economy whereas fiscal policy refers to the government's decision about taxation and spending *i.e.*, budgetary policy of the government.

9. Enlist three consequences of excess AD.

Ans. The effect of excess demand on output, employment and prices is as follows:

(*i*) Effect on Output: In the situation of excess demand, output does not increase. The economy is already in the state of full capacity production.

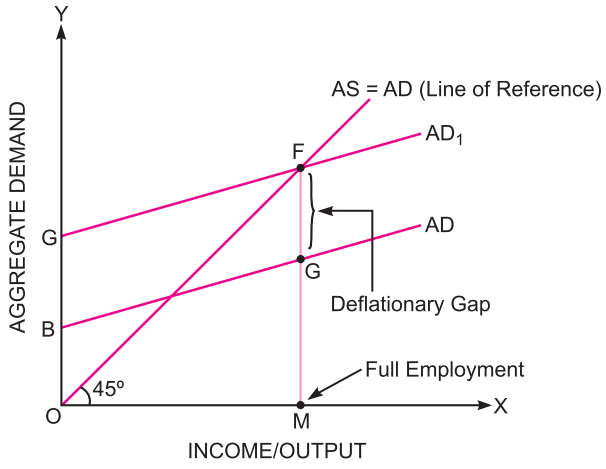
(*ii*) **Effect on Employment:** Employment will not increase because there is no involuntary unemployment in the economy. The economy has already achieved full employment.

(*iii*) **Effect on Prices:** Excess demand only generates pressure of demand on the existing flow of goods and services in the economy. Accordingly, prices tend to rise.

10. Show the measurement of the deflationary gap with the help of a diagram.

Ans. Deflationary gap is the deficiency of AD required to maintain full employment equilibrium in the economy.

The figure below shows that, full employment equilibrium is struck at point F. However, if the level of demand happens to be AD, it is short of its full employment level. Accordingly, deflationary gap occurs to the tune of $AD_1 - AD = FG$.



PART B: INDIAN ECONOMIC DEVELOPMENT

Chapter-1: Employment

1. What is meant by the term unemployment? Discuss the two main features of employment.

Ans. Unemployment refers to a situation when people are willing to work at the existing wage rate, and are able to work, but are not getting work.

Features of employment are as follows:

(*a*) Those in employment may be classified as (*i*) Self-employed (engaged in their own business or profession), (*ii*) Hired workers (work for others or render their services for others)

(*b*) Hired workers are further divided into two categories *i.e.*, (*i*) casual workers (*ii*) regular workers

2. Explain the major causes of unemployment in India.

Ans. The major causes of massive unemployment in India are as these:

(*i*) Slow Economic Growth: Indian economy is underdeveloped and its rate of growth is very slow. Slow growth rate fails to generate enough employment opportunities for the rising labour force.

(*ii*) Rapid Growth of Population: Constantly rising population has been a grave problem in India. It is one of the principal factors contributing to unemployment.

(*iii*) Agriculture–A Seasonal Occupation: Agriculture is underdeveloped in India and so offers seasonal employment. Its seasonal character does not provide stable jobs to the farmers throughout the year. Farmers often remain idle for three to four months in a year.

(*iv*) Lack of Irrigation Facilities: Despite decades of planning, irrigation facilities continue to be scant. For want of irrigation, mono-cropping (only one crop a year) becomes a compulsion. In the absence of multi-cropping, opportunities of employment remain limited.

(*v*) Low Savings and Investment: There is scarcity of capital and even the scarce capital has not been optimally used to eradicate unemployment. Bulk of the capital has been invested in large-scale industries where there is high capital per unit of labour. Employment of labour per unit of capital remains significantly low.

(*vi*) Limited Mobility of Labour: Mobility of labour in India is very low. Owing to a variety of family as well as social constraints, people are unwilling to move to far-off areas even when jobs are available there. Lesser the mobility, greater the unemployment.

(*vii*) Use of Labour-saving Technology: GDP growth is increasingly becoming dependent on the use of labour-saving technology, rather than employment of labour. Consequently, GDP growth fails to generate opportunities of employment.

3. Comment upon the distribution of employment in different sectors of the economy.

Ans. The below listed features highlight the distribution of employment in different sectors of the economy.

(*i*) A large segment of workforce continues to depend on primary activities to make a living. This is despite the fact that the level of productivity and therefore the wage rate is significantly lower in primary sector compared to secondary and tertiary sectors. This points to the backwardness of the Indian economy.

(*ii*) Greater employment in primary sector (despite its low productivity) reveals that secondary and tertiary sectors have failed to generate ample job opportunities. This is another pointer to the backwardness of the Indian economy.

(*iii*) Secondary sector lagging behind the tertiary sector points to the fact that industrialisation has failed to take-off to become the leading sector of growth. We all know that developed

economies are industrial economies.

4. Discuss the male-female distribution of workforce on the basis of region (in India).

Ans. The following facts highlight the male-female distribution of workforce on the basis of region (in India)

(*i*) A huge percentage of female workforce (57.1 per cent) is engaged in primary sector. This is because:

(*a*) Primary activities of production are confined largely to rural areas, and

(*b*) Mobility of women in rural areas is extremely low. They would prefer to do jobs close to their homes, even when wage rate is low.

(*ii*) Percentage of men finding employment in primary sector (40.7 per cent) is only next to that of women. It is also fairly low. It is explained in terms of the lack of jobs outside agriculture in the rural areas.

The figure below shows male-female workforce across different sectors of employment.

5. What is meant by casualisation of the workforce? Comment upon the status of casual workers in India.

Ans. Casualisation of workforce refers to a situation when the percentage of casually-hired workers in the total workforce tends to rise over time.

The following features highlight the status of casual workers in India:

(*a*) They are highly vulnerable to market uncertainties.

(*b*) They are not entitled to any social security benefits. Further, these workers remain unprotected by labour laws, and are therefore, highly vulnerable to uncertainties of the market.

6. Distinguish between urban and rural unemployment.

Ans.

Sr.no.	Basis	Urban Unemployment	Rural Unemployment
1.	**Define**	It refers to that type of unemployment which exists in urban areas.	It refers to unemployment which exists in rural areas.
2.	**Cause**	It is primarily a phenomenon of the industrial or tertiary sector.	It is primarily a phenomenon of the agricultural sector.
3.	**Examples**	Educated unemployed, frictional unemployment	Disguised unemployment, seasonal unemployment

7. Distinguish between formal and informal sectors. How can we improve the conditions of workers in the informal sector?

Ans.

Formal Sector	Informal Sector
(*i*) Formal sector refers to organised sector of the economy.	(*i*) Informal sector refers to unorganised sector of the economy.
(*ii*) This sector includes all government departments, public enterprises and private establishments which hire 10 or more workers.	(*ii*) This sector includes all such private enterprises which hire less than 10 workers, besides farming and self-employment ventures.
(*iii*) Trade unions can be formed in formal sector.	(*iii*) Trade unions cannot be formed in informal sector.
(*iv*) Workers in the formal sector are entitled to social security benefits such as provident fund, gratuity, pension, etc.	(*iv*) Workers in the informal sector are not entitled to social security benefits.

Legal regulations, social protection systems, including social insurance, assistance and

employment generation programmes should be initiated by the government on timely basis so as to protect the interest of workers in the informal sector. Minimum wage legislation and stipulated hours of work are examples of such legislations which seem to protect the interest of the masses.

8. What is meant by the term jobless growth? State its features.

Ans. Jobless growth is a situation where the level of output in the economy tends to rise owing to innovative technology, without any perceptional rise in the level of employment. In labour-surplus countries like India where there is a problem of staggering unemployment, economic growth becomes meaningful only when it is associated with greater opportunities of employment. Unfortunately, Indian economy is experiencing GDP growth more through technology than through the employment of labour. It is a situation of jobless growth.

9. Enlist the various steps taken by the government to solve the problem of unemployment in India.

Ans. Governments, both at the Central level as well as State level, play an important role in generating employment opportunities, directly and indirectly. Government creates employment directly by employing people in public sector enterprises, government run hotels, and transport companies. When the output of goods and services from government owned enterprises increase, the output of private enterprises (which receive raw material from government enterprises) also increases and hence it increases the number of employment opportunities in the economy. Thus, the government, in this case, generates employment opportunities indirectly.

Following are some of the principal measures adopted by the government under Five Year Plans to remove unemployment:

(*a*) **Jai Prakash Rozgar Guarantee Yojana (JPRGY):** The scheme seeks to provide guaranteed employment in the most backward districts of the country.

(*b*) **Swarna Jayanti Shahri Rozgar Yojana (SJSRY):** This Yojana was launched on December 1, 1997. The objective of this yojana is to provide self-employment or wage employment to urban unemployed or underemployed persons.

(*c*) **Prime Minister's Rozgar Yojana (PMRY):** The scheme is for providing employment to educated unemployed. The scheme provides a loan of up to ₹ 1 lakh for opening his own enterprise and ₹ 2 lakh for other activities.

10. Distinguish between disguised unemployment and seasonal unemployment. How can disguised unemployment be combated/tackled?

Ans.

Sr.no.	Basis	Disguised unemployment	Seasonal unemployment
1.	Define	It refers to a situation when people appear to be employed but actually they are not, as their contribution to output is zero.	It refers to a situation where employment is largely seasonal in nature as during saving and harvesting seasons in agricultures.
2.	Area	It is mostly found in agriculture.	It is mostly found both in agriculture and in agro-based industries.
3.	Marginal productivity of labour (MPl)	$MP_L = 0$, as the labour adds no value to the production process.	It adds value to the production process when required.

Chapter-2: Infrastructure

1. Distinguish between economic and social infrastructure.

Ans. (*i*) Economic infrastructure refers to such elements of support system (like power, transport and communication) which serve as a driving force for production activity in the economy. Social infrastructure, on the other hand, refers to such elements of support system (like schools, colleges, hospitals and nursing homes) which serve as a driving force for social development of a country.

(*ii*) While economic infrastructure directly accelerates the process of growth, social infrastructure accelerates it indirectly through human development.

2. How does infrastructure contribute towards economic development?

Ans. Following observations highlight how infrastructure contributes towards economic development:

(*i*) Infrastructure impacts productivity in primary sector, secondary sector and tertiary sector of the economy.

(*ii*) Infrastructure induces investment. In fact, infrastructure is the backbone of business investment.

(*iii*) Infrastructure generates linkages in production. It is a situation when expansion of one industry facilitates the expansion of the other. Accordingly, growth becomes a self-propelling activity of change.

(*iv*) Infrastructure enhances size of the market. It was with a view to expanding size of the market for the British products in India that a network of railways was developed under the British Raj.

(*v*) Infrastructure enhances ability to work. Implying a rise in efficiency and therefore, a rise in productivity. Accordingly, growth process is accelerated.

(*vi*) Infrastructure facilitates outsourcing. India is emerging to be global destination for call centres, study centres and medical tourism. It is owing largely to its sound system of social infrastructure.

3. Comment upon the state of infrastructure in India.

Ans. With the launch of Five Year Plans, the government took upon itself the responsibility of infrastructural development in the country. Construction of dams, roads and bridges & provision of hospital and educational institutes were almost entirely funded through government expenditure. Due to low investment in infrastructure, crop residues, dung and fuel wood are primary sources to meet the energy requirement in rural areas. In rural areas, only 56 per cent of the households had an electricity connection, 43 per cent of the households used kerosene and 85 per cent of the rural households used bio-fuels to cook food. 69 per cent of the households had access to drinking water through open sources (wells, lakes, ponds and canals) while only 31 per cent rural households had access to tap water. Only 30 per cent of the rural households had access to improved sanitation in rural areas.

However, as the government's investment proved to be inadequate, private sector slowly found its way into sharing the responsibility of development of infrastructure in the country. The private sector, at present, either in partnership with the public sector, or solely, plays a major role in the provision of infrastructural facilities in the country. Yet, infrastructural base in the country continues to be inadequate across all sectors of the economy. Which is why our growth process remain like a broken pyramid.

4. Enlist the important developments in the field of health services in India after independence.

Ans. Over the years, India has built a vast health infrastructure and manpower at different levels. At the village level, Primary Health Centres (PHCs) have been set-up by the government. Since independence, there has been a significant expansion in the physical provision of health services in India. Significant it is to note that between the period 1951-2018, number of dispensaries and hospitals together has increased from a little over 9,300 to 53,800. There has been a substantial rise in the number of hospital beds from 1.2 lakh to 7.1 lakh. Also, nursing personnel increased from 18,000 to 30 lakh and allopathic doctors from 62,000 to 11.5 lakh. Expansion of healthcare facilities has been so significant that there is a complete eradication of smallpox from India which at one time used to be a deadly disease in the country

However, despite a significant improvement over time, public health infrastructure in India is highly deficient compared to advanced countries of the world. Government expenditure on public health infrastructure is not expanding to the extent required. As a result, health infrastructure is gradually turning to be a profiteering venture of the industrialists. Thus, has led to a huge gulf between the healthcare of the rich on the one hand, and of the poor on the other.

5. What are the major points of difference between the public and private sector in healthcare?

Ans.

Sr.no.	Basis	Private sector in healthcare	Public sector in healthcare
1.	Define	The hospitals managed and funded by an individual or a group of people fall under the category of private sector healthcare.	The hospitals which are fully managed and funded by the state fall under the category of public sector healthcare.
2.	Doctor to patient ratio	It has a high doctor to patient ratio.	It has a low doctor to patient ratio.
3.	Quality of services offered	It provides quality healthcare services.	Treatment is mostly free which leads to poor infrastructural facilities.
4.	Affordability	Are not easy to afford.	Are affordable to most patients.

6. Write a short note on medical tourism.

Ans. Medical tourism refers to a scenario where people travel abroad to obtain medical treatment. People in countries where the spending on public healthcare sector is extremely low and where the healthcare sector has yet not evolved (as in African, South American and Middle Eastern nations) adopt this alternative.

India is one of the most favourable medical tourism destinations in the world due to these reasons:

(*i*) Cost of medical treatment in India is significantly lower than in most developed countries of the world.

(*ii*) India offers high quality medical services, especially tertiary healthcare which are at par with those offered in the west at significantly high price.

7. How can we say that healthcare is an emerging challenge in India?

Ans. Following observations highlight that health care is an emerging challenge in India.

(i) **Unequal Distribution of Healthcare Services:** Distribution of healthcare services is extremely unequal across rural and urban sectors of the country. Most of the healthcare facilities have been confined to the urban areas.

(ii) **Communicable Diseases:** Communicable diseases like AIDS (Acquired Immune Deficiency Syndrome), HIV (Human Immunodeficiency Virus) and SARS (Severe Acute Respiratory Syndrome) are raising their ugly heads and are posing a serious threat to the society.

(*iii*) **Poor Management:** There is a substantial mismatch between the number of patients and the number of healthcare centres. Health personnel are grossly inadequate particularly in the rural areas, and often the rural folk have to rush to the urban healthcare centres or be the victims of local quacks (un-authorised doctors).

(*iv*) **Privatisation:** The government is gradually moving towards privatisation of healthcare services. The number of private hospitals is surging in place of government hospitals. Consequently, healthcare is becoming increasingly expensive and beyond the reach of the millions in India.

(*v*) **Poor Upkeep and Maintenance:** Upkeep and maintenance of the government healthcare centres is very poor. The quality difference between private and public hospitals is so huge that the people are often compelled to depend on private treatment, even when not affordable.

(*vi*) **Poor Sanitation Level:** Sanitation level is extremely poor both in the rural and urban areas in India.

8. Explain what is meant by Indian System of Medicine (ISM)?

Ans. Indian systems of medicine are the systems of medicine which are considered to be Indian in origin or which have come to India from outside and got assimilated into Indian culture. India has six recognised systems of medicine in this category. These are: Ayurveda, Yoga, Unani, Siddha, Naturopathy and Homeopathy (AYUSH). At present, there are 4,095 AYUSH hospitals and 27,951 dispensaries and as many as 8 lakh registered practitioners in India.

9. Comment upon the state of rural infrastructure in India.

Ans. According to the Census 2011, only 56 per cent of rural households had an electricity connection and 43 per cent used kerosene. For cooking, about 85 per cent household of rural India used bio-fuels. Supply of tap water is available to only 24 per cent households in rural areas. About 69 per cent of the population drinks water from open sources such as wells, tanks, ponds, lakes, rivers, canals, etc. Access to improved sanitation in rural areas is only 30 per cent.

10. How can we say that women's health has become a matter of great concern in recent times?

Ans. Women's health in India become a matter of great concern. Because, more than 50 per cent of women in India in the age group of 15-49 years suffer from nutritional deficiency. Female foeticide is a common practice, causing a decline in child sex ratio (from 927 in 2001 to 919 in 2011) and suggesting a social bias of healthcare against women in the country.

Chapter-3: Environment and Sustainable Development

1. Define the term environment and state its significance.

Ans. Environment is defined as all those conditions and their effects which influence human life. It includes: biotic (or living) components, *viz*., birds, plants & animals, forests, fisheries and abiotic (or physical) components, *viz*., air, water, land, soil, climate, mountains, minerals.

Its main functions are as these:

(*i*) **Environment Offers Resources for Production:** Environment includes physical resources (minerals, wood, water, soil and others) which are available to us as a free gift of nature. These resources are used as inputs for production. In fact, production is simply the process of conversion of natural resources into useful things.

(*ii*) **Environment Sustains Life:** Environment includes sun, soil, water and air which are essential ingredients for the sustenance of human life. Absence of these elements of environment implies the end of life.

(*iii*) **Environment Assimilates Waste:** Production and consumption activities generate wastes. This occur mostly in the form of garbage. Environment absorbs it.

(*iv*) **Environment Enhances Quality of Life:** Surroundings include rivers, oceans, mountains and deserts. Man enjoys these surroundings, adding to the quality of his life.

2. Enlist the causes of the environmental crisis.

Ans. Principal causes of environmental crisis are as under:

(*i*) **Population Explosion:** Pressure of population on land has tremendously increased and consequently land has been ruthlessly exploited. It has caused substantial conversion of forest land into industrial and residential buildings.

(*ii*) **Widespread Poverty:** A large section of the poor people cut trees for fuel wood which they sell to earn their livelihood. This causes a massive erosion of natural capital ultimately leading to a crisis.

(*iii*) **Increasing Urbanisation:** Increasing urbanisation has caused pressure on housing and other civic amenities. It has resulted in increasing demand for land and excessive exploitation of other natural resources.

(*iv*) **Increasing Use of Insecticides, Pesticides and Chemical Fertilizers:** Increasing use of chemical fertilizers, pesticides and insecticides has also added to environmental pollution.

(*v*) **Rapid Industrialisation:** Rapid industrialisation has also contributed to air, water and noise pollution. Industrial smoke is a serious pollutant.

(*vi*) **Multiplicity of Transport Vehicles:** Multiplicity of transport vehicles has substantially increased noise and air pollution.

3. Why do we say that there is a dichotomy of environmental degradation in India?

Ans. India's environmental problems pose a dichotomy:

(*a*) These problems are poverty induced, as poverty compels people to indulge in excessive tree-felling that contributes to deforestation.

(*b*) These problems are related to affluence of consumption, as affluence leads to excessive waste (particularly e-waste) which is beyond the absorption capacity of the earth.

4. Define land degradation and state its causes.

Ans. Degradation of land means loss of fertility (or loss of productivity) of land which occurs due to inappropriate land-use or land-management practices.

Following principal factors contributing to degradation of land in India:

(*i*) Excessive grazing, leading to loss of vegetation.

(*ii*) Erosion of soil caused by tree-felling.

(*iii*) Shifting cultivation, leading to deforestation [when a plot of land loses its fertility, it is abandoned and cultivation is shifted to the other plot of land].

(*iv*) Forest fires, leading to loss of vegetation.

(*v*) Inadequate soil conservation measures, leading to loss of soil fertility.

(*vi*) Improper crop rotation, impairing soil-health.

(*vii*) Indiscriminate use of agro-chemicals (fertilizers and pesticides) impairing soil-health.

(*viii*) Excessive extraction of groundwater, lowering water table and challenging the productivity of land.

5. What is meant by the term sustainable development? How can it be achieved?

Ans. Sustainable development is that process which fulfils the needs of the present generation without challenging the ability of the future generations to fulfil their needs. Implying that the resources are not excessively exploited, but are rationally utilised. Sustainable development can be achieved by following the below listed measures.

(*i*) Reliance on Non-conventional Sources of Energy: Most of the energy needs of India are met through thermal and hydro power plants. These plants have an adverse impact on environment while they are being set up as well during the course of their operation. India should focus on generating power from solar energy and wind energy which are cleaner and greener sources of energy.

(*ii*) LPG, Gobar Gas in Rural Areas: Households in rural areas are dependent on non-commercial sources of energy as fuel which has several adverse implications like deforestation, reduction in green cover, wastage of cattle dung and air pollution. The Government of India has initiated Ujjwala Yojana, focused on providing subsidised LPG to women below poverty line. In addition, gobar gas plants are being provided through easy loans and subsidy.

(*iii*) CNG in Urban Areas: The Delhi Transport Corporation is the world's largest public transport network running on Compressed Natural Gas (CNG), which has contributed to lowering of air pollution in the city.

(*iv*) Wind Power: Wind power can be harnessed without any adverse impact on the environment. Wind turbines move in the wind and generate electricity without harmful emissions.

(*v*) Biocomposting: After Green Revolution, Indian agriculture shifted completely from compost to chemical fertilizers. This has led to degradation of land, and water pollution. The Government of India has taken a series of steps to promote organic methods of farming under the National Mission on Sustainable Agriculture. The use of biofertilizers is also being promoted as a part of the scheme.

(*vi*) Biopest Control: The chemical pesticides contaminate food products, soil, water bodies and even groundwater. Efforts are being made to introduce biopest control. Several types of pest controlling chemicals have been extracted from Neem and their use is being encouraged. Mixed cropping and crop-rotation are also being encouraged to minimise the pest-attack. Use of animals and birds is also being considered for controlling pests.

6. What do we mean by global warming? Why does it occur? How can it adversely affect the earth?

Ans. **Global Warming:** It is a situation referring to a gradual but consistent increase in global temperature, thanks to environmental pollution and deforestation. Owing to emission of Greenhouse Gases (carbon dioxide in particular), the earth's surface is becoming increasingly warmer, escalating the melt of polar ice, in turn, implying a rise in sea level. Consequently, ecological balance is impaired, leading to natural calamities. Ultimately, it implies a serious threat to human life and the poor countries are the worst sufferers.

7. Write a short note on ozone depletion and state the causes of the same.

Ans. Ozone depletion refers to reduction in ozone (a protective layer) in the stratosphere. This occurs owing to the excessive presence of chlorine and bromine compounds, like chlorofluorocarbons (CFCs) [used as cooling substances in air conditioners & refrigerators and in aerosol propellants] and bromofluorocarbons (halons) [used in fire extinguishers]. As ozone depletes, there is greater ultraviolet radiation reaching the earth which is a danger to living organisms.

Manufactured chemicals especially manufactured halocarbons, refrigerants, solvents, propellants, and foam blowing agents chlorofluorocarbons (CFCs, HCFs), halons) lead to ozone depletion.

8. What is meant by deforestation? Enlist its adverse effects.

Ans. Deforestation refers to the cleaning or thinning of forests by humans. It leads to a decrease in forest cover and in turn negatively affects our biodiversity. Loss of trees, climate change, desertification, soil erosion, etc are some of the major effects of deforestation.

9. State the principal factors contributing to water pollution in India.

Ans. The four principal factors contributing to water pollution in India are as follows:

(*i*) Industrial waste (particularly of those using chemicals as inputs) flows into the rivers.

(*ii*) Domestic sewerage that flows into streams and rivers.

(*iii*) Agricultural run-off (mixed with pesticides and insecticides) that runs into streams and rivers.

(*iv*) Thermal power houses discharging ash mixed with water.

10. What is meant by solid waste management? How can it contribute towards achieving sustainable development?

Ans. Solid waste management refers to the act of collecting, treating, and disposing solid waste material. The unplanned development of township and urbanisation has led to the massive problem of waste management. It is estimated that the volume of waste is projected to increase from 64-72 million tonnes at present to 125 million tonnes by 2031. Out of total waste generated, only 43 million tonnes is collected, 11.9 million tonnes is treated and 31 million tonnes is dumped in landfill sites.

The following observations highlight the way solid waste management supports sustainable development.

(*a*) It is essential for a healthy, clean and hygienic environment.

(*b*) It helps maintain cleanliness of roads and drains.

(*c*) If not disposed properly it can lead to vector bleeding and lead to spread of diseases and even epidemics.

(*d*) Reduces toxicity of food and water, helps reduce resource depletion.

Chapter-4: Comparative Development Experiences of India and its Neighbours

1. Why has the population of India and Pakistan not declined as sharply as the population of China?

Ans. There has been a sharp decline in the population of China due to its adoption of one child policy. One Child Policy was introduced in China in 1979 to address the issue of population explosion. Pursuing this policy China has successfully reduced the growth rate of population to nearly half, from 1.33 per cent in 1979 to nearly 0.46 per cent in 2017. India and Pakistan on the other have failed in initiating any such measure of population control.

2. Compare the developmental strategies of India with that of China and Pakistan.

Ans. China introduced reforms in 1978 to address the slow pace of economic growth. Important it is to note that, unlike India and Pakistan, the reforms in China were not dictated by the World Bank and International Monetary Fund. China embarked upon the policy of Great Leap Forward and introduced land reforms on a massive scale. Huge investment in health and infrastructure (focusing on SEZ) led to a phenomenal breakthrough in the economy of China. FDI worked like a panacea (a solution for all problems) for the Chinese economy and ultimately China emerged as the epicentre of manufacturing activity in the world.

In Pakistan, unfortunately, reforms introduced in 1988 failed to sustain the pace of growth it had earlier achieved. Economic indicators of Pakistan started losing their sheen. While prior to the reforms, the proportion of poor had declined from 40 per cent in 1960s to 25 per cent in 1980s, during the post-reform period, there was a reversal of this trend. Also compared to 1980s, GDP growth rate was recorded to be lower in 1990. To cope with its forex-needs, Pakistan has continued to rely on remittances from abroad and borrowings from rest of the world.

India's performance is neither so bad nor so good. We are far ahead Pakistan, but far behind China. GDP of Pakistan is just 11 per cent of GDP of India. But GDP of India is just 41 per cent of GDP of China.

3. What is meant by "The Great Proletarian Cultural Revolution"?

Ans. **Great Proletarian Cultural Revolution:** It was initiated by the chairman of Chinese Communist Party, Mao Zedong in 1965 and continued till 1976. During this period, the students and professionals were sent to the countryside to gain professional expertise. The cultural revolution succeeded in combating the then recessionary cycle in China. It also succeed in imposing Maoism (the socio-economic ideology propounded by Mao) as the dominant ideology governing the development path of the Chinese economy.

During the post-1978 period, China introduced economic reforms by partially accepting the principles of 'market-economy'. Basically, it involved a strategic shift from a system of closed economy (with no role of FDI) to a system of open economy (with a significant reliance on FDI). These reforms were introduced in two phases as under:

(*i*) **First Phase of Economic Reforms:** In the first phase, reforms were introduced in the agricultural sector which led to withdrawal of the commune system of farming. The commune land was divided into smaller pieces of land and allocated to individual households. However, the land was allocated only for the purpose of farming, devoid of ownership rights. Thus, the farmers were in a way, tenants of the Government of China, not the owners of the soil.

(*ii*) **Second Phase of Economic Reforms:** In the second phase, reforms were initiated in the industrial sector. These reforms included the following changes in the strategy of growth:

(*a*) Private sector enterprises (particularly owned and operated by the local collectives) were allowed to undertake production of goods.

(*b*) The system of dual pricing was introduced.

(*c*) Special Economic Zones were set up to attract foreign investors.

4. Compare and contrast the demographic indicators of India with China and Pakistan.

Ans. Following observations highlight the salient demographic indicators of China, Pakistan and India:

(*i*) Growth rate of population has been cut to half in China, following strict enforcement of its policy of 'one child norm'. India and Pakistan are still wrestling with the problem of high growth rate of population, which is about 1.03 per cent in India and 2.05 per cent in Pakistan.

(*ii*) The size of population is comparatively very small in Pakistan, just about 1/10th of China or India.

(*iii*) Density of population is low in China, thanks to its large geographical area compared with India and Pakistan. It is estimated to be 148 persons per square kilometer in China compared to 455 and 275 persons (per square kilometer) in India and Pakistan, respectively.

(*iv*) Both China and Pakistan are showing brighter signs of urbanisation than India.

(*v*) Sex ratio is found to be low in all the three countries pointing to social backwardness where people hold high preference for a son in the family.

5. Which sector became the driving force for achieving higher growth rate in India and China?

Ans. In terms of the sectoral contribution to GDP, economies of India and Pakistan are relying heavily on tertiary sector and their industrial sector is lagging far behind. The economy of China is also relying significantly on the service sector, but its industrial sector is not lagging far behind. While in India contribution of industrial sector to GDP is 30 per cent and in Pakistan it is merely 19 per cent, in China it is as high as 41 per cent. This points to a much deeper structural change in the economy of China, compared to India and Pakistan.

- Experience of China, in this respect, is like the experience of most developed countries in the world.
- Historical experience of the developed countries shows that in terms of the percentage share in GDP, it was first the secondary sector and later the tertiary sector which emerged as the leading sector of the economy.
- Experience of India and Pakistan, however, shows a major shift directly from primary to the tertiary sector. Implying that lesser emphasis has been given to industrial expansion in India and Pakistan, compared to China.
- Expansion of services sector in India and Pakistan is owing to faster integration of these economies with the global economies (under the economic and political impact of the developed nations).

6. Define special economic zones. State its main features.

Ans. Special Economic Zone (SEZ) is an area within the country where economic regulations are different than those in rest of the country.

- The SEZ are conducive to Foreign Direct Investment (FDI).
- The businesses operating within an SEZ get the advantages of lower taxes and tariffs.
- While many countries, including India, have set up SEZs, Chinese model has shown far greater success than any other in the world.

China presented itself as an attractive destination for FDI (foreign direct investment) by developing SEZ which offered substantial tax (and non-tax) rebates to the foreign investors. (ii) China successfully explored and exploited

7. State reasons for slow economic growth in Pakistan.

Ans. Slow growth and re-emergence of poverty in Pakistan can be explained with the help of below listed observations:

(*i*) Pakistan has failed to bring about stable institutional reforms in agriculture. Accordingly, performance of agricultural sector has remained volatile.

(*ii*) For its foreign exchange requirements, Pakistan has relied largely on remittances from abroad, and (volatile) agricultural exports. A setback to these sources of foreign exchange has caused a corresponding setback to the process of growth.

(*iii*) Lack of political stability in Pakistan has caused huge public expenditure on law and order.

(*iv*) Pakistan is allocating huge funds to build a strong defence-system, even when it implies a huge cut in developmental expenditure.

8. What are the major indicators of human development?

Ans. The major indicators of human development are:

(*i*) rise in life expectancy

(*ii*) education attainment by the entire population

(*iii*) rise in per capita income

9. State the developmental strategy of India.

Ans. After independence in 1947, India adopted a diversified and unique development strategy. Following are its principal features:

(*i*) It was a mixed-economy model of growth.

(*ii*) Public sector was assigned the key role of kick-starting the process of growth.

(*iii*) The process of industrialisation was based on the policy of import substitution. It allowed protection to the domestic industry by way of heavy duty on the competing imports. Also, competing imports were controlled and managed by the government.

(*iv*) Green Revolution was the hallmark of change in the agricultural sector which raised the production of food grains.

(*v*) Capital goods industries were nationalised with a thrust on public sector investment.

(*vi*) Realising that the pace of growth was coming to a grinding halt there was a major shift in the strategy in 1991. FDI became the fulcrum of growth. Process of growth was linked with the process of liberalisation, privatisation and globalisation.

10. Compare the sectoral changes of India, Pakistan and China.

Ans. (*i*) All the three countries have experienced a noticeable structural transformation. No longer agriculture is the principal contributor to GDP.

(*ii*) In terms of the sectoral contribution to GDP, economies of India and Pakistan are relying heavily on tertiary sector and their industrial sector is lagging far behind. The economy of China is also relying significantly on the service sector, but its industrial sector is not lagging far behind. While in India contribution of industrial sector to GDP is 30 per cent and in Pakistan it is merely 19 per cent, in China it is as high as 41 per cent. This points to a much deeper structural change in the economy of China, compared to India and Pakistan.

- Experience of China, in this respect, is like the experience of most developed countries in the world.
- Historical experience of the developed countries shows that in terms of the percentage share in GDP, it was first the secondary sector and later the tertiary sector which emerged as the leading sector of the economy.

- Experience of India and Pakistan, however, shows a major shift directly from primary to the tertiary sector. Implying that lesser emphasis has been given to industrial expansion in India and Pakistan, compared to China.
- Expansion of services sector in India and Pakistan is owing to faster integration of these economies with the global economies (under the economic and political impact of the developed nations).