

**Weightage**  
**ECONOMICS**  
**CLASS XII**

**PART A: INTRODUCTORY MICROECONOMICS**

| Units No. |  | Marks |
|-----------|--|-------|
| 1.        | Introduction                                       | 04    |
| 2.        | Consumer Behaviour and Demand                      | 18    |
| 3.        | Producer Behaviour and Supply                      | 18    |
| 4.        | Forms of Market and Price Determination            | 10    |
| 5.        | Simple Application of Tools of Demand and Supply – |       |

**PART B: INTRODUCTORY MACROECONOMICS**

|     |  |    |
|-----|--|----|
| 6.  | National Income and Related Aggregates | 15 |
| 7.  | Money and Banking                      | 08 |
| 8.  | Determination of Income and Employment | 12 |
| 9.  | Government Budget and the Economy      | 08 |
| 10. | Balance of Payments                    | 07 |

|              |            |
|--------------|------------|
| <b>Total</b> | <b>100</b> |
|--------------|------------|

## **SYLLABUS**

### **PART – A: INTRODUCTORY MICROECONOMICS**

#### **UNIT 1: INTRODUCTION**

**10 PERIODS**

What is an economy? Central problems of an economy: what, how and for whom to produce: concepts of production possibility frontier and opportunity cost.

#### **UNIT 2 : CONSUMER EQUILIBRIUM AND DEMAND**

**32 PERIODS**

Consumer's equilibrium – meaning of utility , marginal utility , law of diminishing marginal utility , conditions of consumer's equilibrium using marginal utility analysis.

Indifference curve analysis of Consumer's equilibrium – the consumer's budget (budget set and budget line), preference of consumer (indifferent curve, indifference map) and conditions of Consumer's equilibrium.

Demand , market demand , determinants of demand , demand schedule , demand curve , movement along and shifts in the demand curve ; price elasticity of demand – factors affecting price elasticity of demand ; measurement of price elasticity of demand – (a) percentage – change method and (b) geometric method (linear demand curve) ; relationship between price elasticity of demand and total expenditure.

#### **UNIT 3 : PRODUCER BEHAVIOUR AND SUPPLY**

**32 PERIODS**

Production function: Total Product, Average Product and Marginal Product.

Returns to a Factor.

Cost and Revenue: Short run costs – total cost, total fixed cost, total variable cost; Average fixed cost, average variable cost and marginal cost – meaning and their relationship.

Revenue – total, average and marginal revenue.

Producer's equilibrium – meaning and its conditions in terms of marginal revenue – marginal cost approach.

Supply , market supply , determinants of supply , supply schedule , supply curve , movements along and shifts in supply curve , price elasticity of supply ; measurement of price elasticity of supply – (a) percentage – change method and (b) geometric methods.

#### **UNIT 4: FORMS OF MARKET AND PRICE DETERMINATION 22 PERIODS**

Perfect Competition –Features: Determination of market equilibrium and effects of shift in demand and supply

Other market forms: Monopoly, monopolistic competition, oligopoly Market – their meaning and features.

**UNIT 5: SIMPLE APPLICATIONS OF TOOLS OF DEMAND AND SUPPLY**  
(Not to be examined) **8 PERIODS**

**PART B: INTRODUCTORY MACROECONOMICS**

**UNIT 6: NATIONAL INCOME AND RELATED AGGREGATES 30 PERIODS**

Some basic concepts: consumption goods, capital goods, final goods, intermediate goods; stocks and flows; gross investment and depreciation.

Circular flow income ; Methods of calculating National Income – Value Added or Product method , Expenditure method , Income method.

Aggregates related to National Income:

Gross National Product (GNP), Net National Product (NNP), Gross and Net Domestic Product (GDP and NDP) – at market price, at factor cost; National Disposable Income (gross and net), Private Income, Personal Income and Personal Disposable Income; Real and Nominal GDP.

GDP and welfare

**UNIT 7: MONEY AND BANKING 18 PERIODS**

Money – its meaning and function.

Supply of money- Currency held by the public and net demand deposit held by commercial banks.

Money creation by the commercial banking system.

Central banking and its functions (example of the Reserve Bank of India).

**UNIT 8 : DETERMINATION OF INCOME AND EMPLOYMENT 25 PERIODS**

Aggregate demand and its components.

Propensity to consume and propensity to save (average and marginal).

Short-run equilibrium output; investment multiplier and its multiplier mechanism.

Meaning of full employment and involuntary unemployment.

Problems of excess demand and deficient demand; measures to correct them – change in government spending, availability of credit.

**UNIT 9 : GOVERNMENT BUDGET AND THE ECONOMY 17 PERIODS**

Government budget – meaning, objectives and components.

Classification of receipts – revenue receipt and capital receipt; classification of expenditure – revenue expenditure and capital expenditure.

Measures of government deficit – revenue deficit, fiscal deficit, primary deficit: their meaning .

Fiscal policy and its role (**non – evaluative topic**).

## **UNIT 10: BALANCE OF PAYMENTS**

**14 PERIODS**

Balance of payments account – meaning and components; balance of payments deficit – meaning. Foreign exchange rate – meaning of fixed and flexible rates and managed floating.

Determination of exchange rate in a free market.

## **RECOMMENDED TEXT BOOKS**

1. Introductory Micro Economics , Class XII , NCERT
2. Introductory Macro Economics , Class XII , NCERT
3. Supplementary Reading Material in Economics , Class XII , CBSE
4. E - Learning study material 2011-12

**COMMON ERRORS WHICH ARE GENERALLY DONE BY STUDENTS OF  
ECONOMICS IN BOARD EXAMINATION:**

- 1. Inability to understand the questions correctly due to language problem. Read the questions carefully twice or thrice. Due to the same problem, they are unable to convey the answers suitably. Practice writing the answers at home to avoid this problem.**
- 2. Inadequate skills in presenting the diagrams due to lack of practice. For e.g. drawing of demand curve instead of supply curve and vice versa; drawing of cost curves instead of revenue curves and vice versa. Diagrams should be practiced regularly.**
- 3. Students are not practicing mathematical problems regularly. The numerical questions and formulae should be practiced.**
- 4. Overall presentation of answers is not as per CBSE expectations.**
- 5. All questions are not attempted by the students. They should attempt all the questions.**
- 8. Inadequate practice and revision lead to confused presentation of answer.**
- 9. Writing question number wrongly. Hence write the question number correctly.**
- 10. Writing answer of one question at different places. Avoid splitting of answer and write the answer at one place.**
- 11. Frequently asked questions in the board examination, should be revised thoroughly. (Last five year board questions) CBSE 2010 sample paper set I and II should be practiced at home within stipulated time period.**
- 12. Devote minimum of two hours time daily at home for self study in economics.**
- 14. Time management should be adhered to strictly and regular practice at home will help to avoid shortage of time/inconvenience during board exams.**

**ALL THE BEST.**

**PART-A**  
**INTRODUCTORY MICRO ECONOMICS**  
**UNIT 1: INTRODUCTION**

**KEY CONCEPTS**

- ❖ MICRO ECONOMICS
- ❖ ECONOMY
- ❖ TYPES OF ECONOMY
  - PLANNED ECONOMY
  - MARKET ECONOMY
- ❖ CENTRAL PROBLEMS OF AN ECONOMY | BASIC ECONOMIC PROBLEMS
  - WHAT TO PRODUCE?
  - HOW TO PRODUCE?
  - FOR WHOM TO PRODUCE?
- ❖ CAUSES OF AN ECONOMIC PROBLEM
- ❖ PRODUCTION POSSIBILITY CURVE
- ❖ MARGINAL OPPORTUNITY COST –MOC
- ❖ MARGINAL RATE OF TRANSFORMATION
- ❖ SCARCITY OF RESOURCES
- ❖ OPPORTUNITY COST

1. **MICRO ECONOMICS:** It is a study of behaviour of individual units of an economy such as individual consumer, producer etc.
2. **ECONOMY:** An economy is a system by which people get their living.
3. **TYPES OF ECONOMY:**
  - (i) Capitalist economy / Market economy
  - (ii) Socialist economy / Planned economy
  - (iii) Mixed economy
4. **MARKET ECONOMY:** It is an economic system, in which all material means of production are owned and operated by the private with profit motive.
5. **PLANNED ECONOMY:** In this economy all material means of production are owned by the government or by a centrally planned authority. All important decisions regarding production, exchange and distributions, consumptions of goods and services are made by the government or by a centrally planned authority
6. **ECONOMIC PROBLEM:** “An economic problem is basically the problem of choice” which arises due to scarcity of resources having alternative uses”.
7. **CAUSES OF ECONOMIC PROBLEM :**
  - i) Scarcity of resources
  - ii) Unlimited wants
  - iii) Limited resources having alternative uses

## **8. BASIC (CENTRAL) ECONOMIC PROBLEMS**

- i) Allocation of resources
  - a. What to produce?
  - b. How to produce?
  - c. For whom to produce
- ii). Efficient Utilization of resources
- iii.) Growth of resources

**9. PRODUCTION POSSIBILITY CURVE (PPC):** PP curve shows all the possible combination of two goods that can be produced with the help of available resources and technology.

**10. MARGINAL OPPORTUNITY COST:** MOC of a particular good along PPC is the amount of other good which is sacrificed for production of additional unit of another good.

**11. MARGINAL RATE OF TRANSFORMATION:** MRT is the ratio of units of one good sacrificed to produce one more unit of other good.

$$\text{MRT} = \frac{\text{Unit of one good sacrificed}}{\text{More unit of other good produced}} = \frac{\Delta y}{\Delta x}$$

**12. SCARCITY OF RESOURCES:** Scarcity of resources means shortage of resources in relation to their demand.

**13. OPPORTUNITY COST:** It is the cost of next best alternative foregone.

**14. POSITIVE ECONOMICS:** Positive economics deals with what is, what was (or) how an economic problem facing the society is actually solved.

**15. NORMATIVE ECONOMICS:** It deals with what ought to be (or) how an economic problem should be solved.

## **VERY SHORT ANSWER QUESTIONS (1 MARK)**

**1. What is economics about?**

Ans : - Economics is the study of the problem of choice arising out of scarcity of resources having alternative uses.

**2. Define scarcity.**

Ans : - Scarcity means shortage of resources in relation to their demand is called scarcity.

**3. What is an economy?**

Ans : - An economy is a system by which people get their living.

**4. Define central problem.**

Ans : - Central problem is concerned with the problems of choice (or) the problem of resource allocation.

**5. What do you understand by positive economic analysis?**

Ans : - It deals with what is (or) how an economic problem facing an economy is solved. It analyses the cause of effect relationship.

**6. What do you understand by normative economic analysis?**

Ans : - Normative economic analysis deals with what ought to be (or) how an economic problem should be solved.

**7. Give one reason which gives rise to economic problems?**

Ans : - Scarcity of resources which have alternative uses.

**8. Name the three central problems of an economy.**

Ans : - i) What to produce?  
ii) How to produce?  
iii) For whom to produce?

**9. What is opportunity cost?**

Ans : - It is the cost of next best alternative foregone.

**10. Why is there a need for economizing of resources?**

Ans : - Resources are scarce in comparison to their demand, therefore it is necessary to use resources in the best possible manner without wasting it.

**11. What is production possibility frontier?**

Ans : - It is a boundary line which shows the various combinations of two goods which can be produced with the help of given resources and technology.

**12. Why PPC is concave to the origin?**

Ans :- PPC is concave to the origin because of increased marginal opportunity cost.

**13. Define marginal rate of transformation.**

Ans :- MRT is the ratio of units of one good sacrificed to produce one more unit of other goods.  $MRT = \Delta y / \Delta x$

**14. What does a point inside the PPC indicate?**

Ans :- Any point inside the production possibility curve indicate underutilization of resources.

**15. What do you mean by the problem of what to produce?**

Ans :- It is the problem of choosing which goods and services should be produced in what quantities.

**16. What do you understand by the problem of how to produce?**

Ans :- It is the problem of choosing technique of production of goods and services.

**17. What does the problem for whom to produce indicate?**

Ans :- The problem of for whom to produce refers to the distribution of goods and services produced in the economy.



**18. Give two examples each of micro economics & macroeconomics.**

Ans :- Microeconomics – Individual demand, individual supply

Macroeconomics – Aggregate demand and aggregate supply

**19. What does a rightward shift of PPC indicate?**

Ans :- It indicates a) growth of resources b) improvement in technology

**20. What is meant by economising of resources?**

Ans :- It means making best use of available resources.

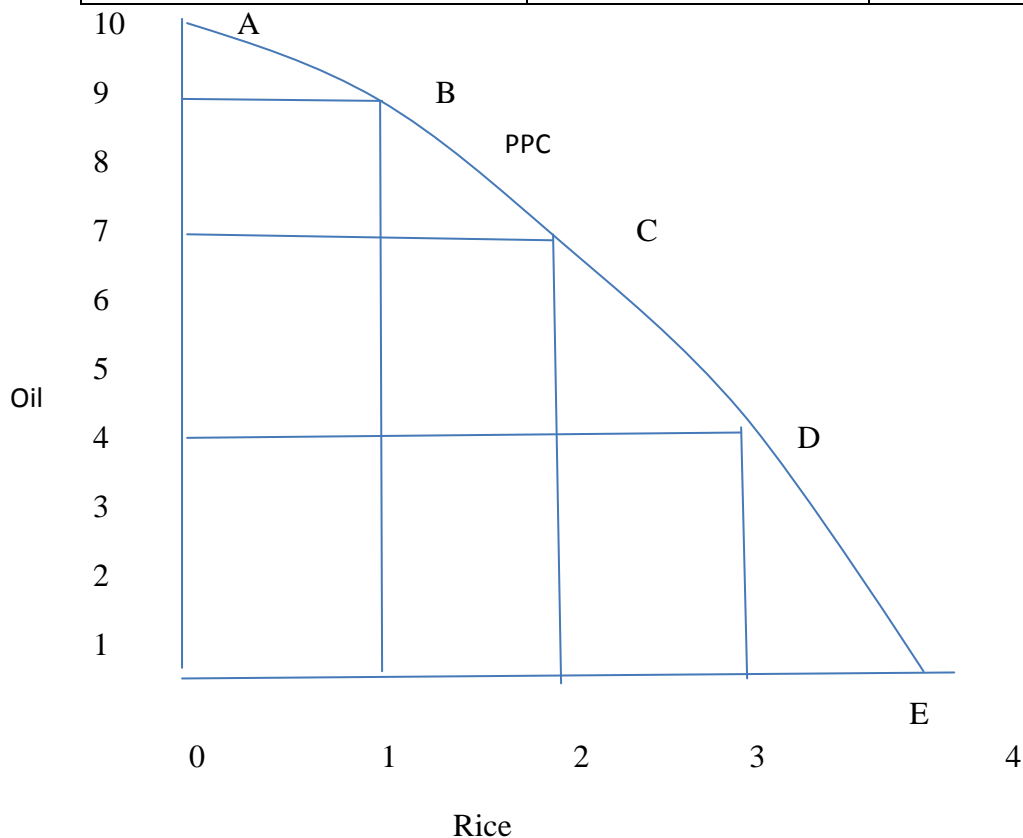
**SHORT ANSWER QUESTIONS (3 / 4 MARKS)**

**1. What is production possibility frontier?**

Ans :- It is a boundary line which shows that maximum combination of two goods which can be produced with the help of given resources and technology at a given period of time.

Ex: An economy can produce two goods say rice or oil by using all its resources. The different combination of rice and oil are as follows:

| Production Possibilities | Rice (quintals) | Oil (litres) |
|--------------------------|-----------------|--------------|
| A                        | 0               | 10           |
| B                        | 1               | 9            |
| C                        | 2               | 7            |
| D                        | 3               | 4            |
| E                        | 4               | 0            |



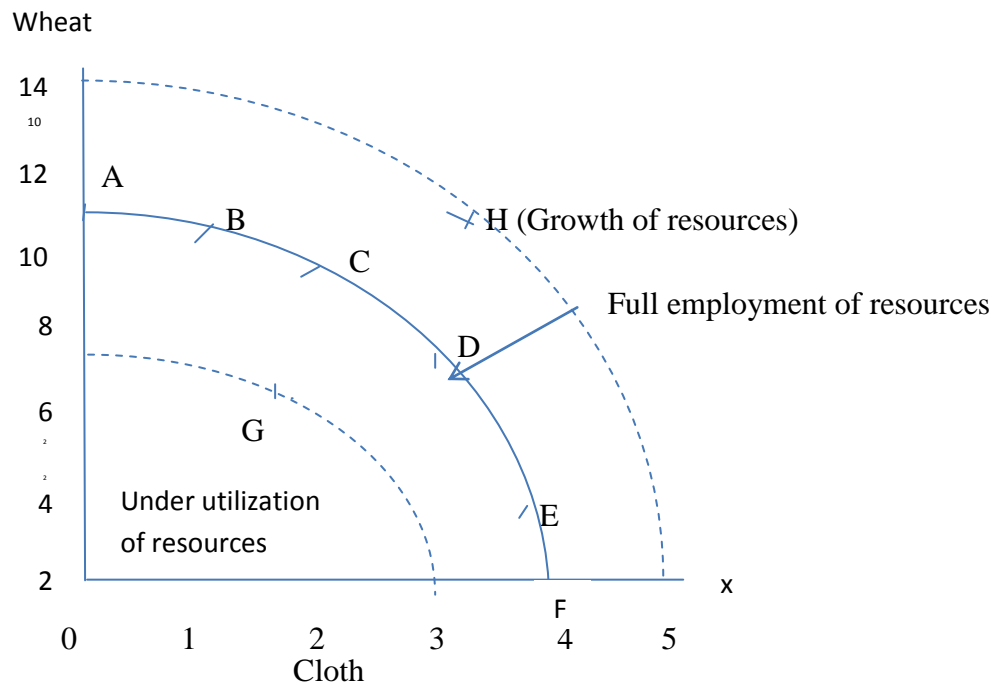
## 2. Draw a production possibility curve and mark the following situations:

- underutilization of resources
- full employment of resources
- growth of resources

Ans. Every point on PP curve like ABCDEF indicates full employment and efficient uses of resources.

Any point below or inside PP curve like G underutilization of resources.

Any point above PP curves like H indicates growth of resources.

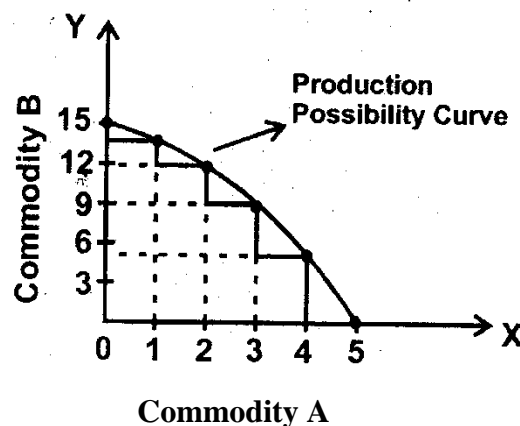


### Production Possibility Curve And Opportunity Cost

It refers to a curve which shows the various production possibilities that can be produced with given resources and technology.

#### Production Possibilities

| Production Possibility | Commodity A | Commodity B | Marginal opportunity cost of commodity A |
|------------------------|-------------|-------------|--|
| A                      | 0           | 15          | -  |
| B                      | 1           | 14          | $15-14=1$                                |
| C                      | 2           | 12          | $14-12=2$                                |
| D                      | 3           | 9           | $12-9=3$                                 |
| E                      | 4           | 5           | $9-5=4$                                  |
| F                      | 5           | 0           | $5-0=5$                                  |



If the economy devotes all its resources to the production of commodity B, it can produce 15 units but then the production of commodity A will be zero. There can be a number of production possibilities of commodity A & B

If we want to produce more commodity B, we have to reduce the output of commodity A & vice versa.

#### **Shape of PP curve and marginal opportunity cost.**

- 1) PP curve is a downward sloping curve.

In a full employment economy, more of one goods can be obtained only by giving up the production of other goods. It is not possible to increase the production of both of them with the given resources.

- 2) The shape of the production possibility curve is **concave** to the origin.

The opportunity cost for a commodity is the amount of other commodity that has been foregone in order to produce the first.

The marginal opportunity cost of a particular good along the PPC is defined as the amount sacrificed of the other good per unit increase in the production of the good in question.

**Example:** Suppose a doctor having a private clinic in Delhi is earning Rs. 5lakhs annually. There are two other alternatives for him.

- 1) Joining a Govt. hospital in Bangalore earning Rs. 4 lakhs annually.
- 2) Opening a clinic in his home town in Mysore and earning 3 lakhs annually.

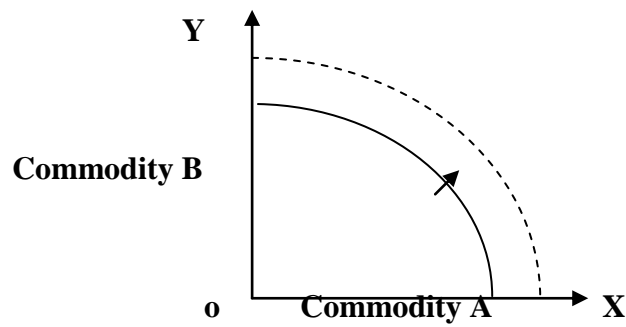
The opportunity cost will be joining Govt. hospital in Bangalore.

Increasing marginal opportunity cost implies that PPC is concave.

#### **Shift in PP curve**

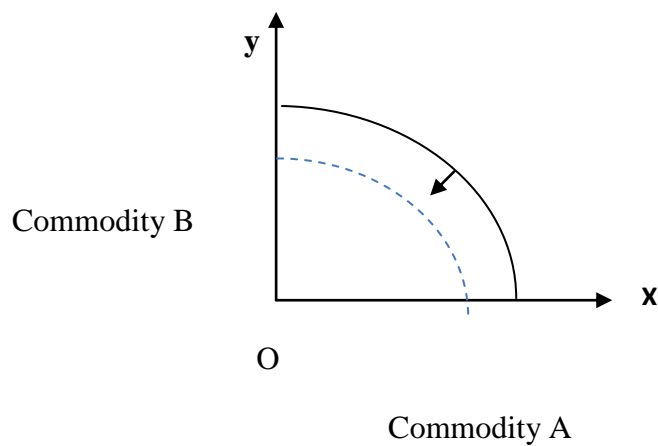
##### **(1) Upward shift**

- (a) When there is improvement in technology.
- (b) Increase in resources.



## (2) Downward shift

When Resources depletes



## 3. Distinguish between a centrally planned economy and a market economy.

| SNo | Planned Economy   | Market Economy  |
|-----|---|---|
| 1   | All the materials means of production are owned by government.                    | All the materials means of production are owned by private individuals.               |
| 2   | Main objectives of production is social welfare                                   | Main objectives of production are maximization of profit.                             |
| 3   | Ownership of property is under government control.                                | There is no limit to private ownership of property.                                   |
| 4   | All the economic problems are solved as per direction of the planning commission. | All the economic problems are solved through price mechanism i.e., demand and supply. |

#### 4. Distinguish between micro economics and macroeconomics.

| SNo | Micro economics   | Macro economics  |
|-----|---|--|
| 1   | It studies individual economic unit.                                      | It studies aggregate economic unit   |
| 2   | It deals with determination of price and output in individual markets     | It deals with determination of general price level and output in the economy.          |
| 3   | Its central problems are price determination and allocation of resources. | Its central problem is determination of level of Income and employment in the economy. |

#### **HOTS**

##### **1. Does massive unemployment shift the PPC to the left?**

Ans:- Massive unemployment will shift the PPC to the left because labour force remains underutilized. The economy will produce inside the PPC indicating underutilization of resources.

##### **2. What does the slope of PPC show?**

Ans. The slope of PPC indicates the increasing marginal opportunity cost.

##### **3. From the following PP schedule calculate MRT of good x.**

|                            |    |    |    |   |   |
|----------------------------|----|----|----|---|---|
| Production possibilities   | A  | B  | C  | D | E |
| Production of good x units | 0  | 1  | 2  | 3 | 4 |
| Production of good y units | 14 | 13 | 11 | 8 | 4 |

| Production of good X units | Production of good Y units | MRT = $\Delta y / \Delta x$ |
|----------------------------|----------------------------|-----------------------------|
| 0                          | 14                         | -                           |
| 1                          | 13                         | 1:1                         |
| 2                          | 11                         | 2:1                         |
| 3                          | 8                          | 3:1                         |
| 4                          | 4                          | 4:1                         |

#### **How are fundamental problems solved in the capitalistic economy.**

In a market-oriented or capitalist economy, the fundamental problems are solved by the market mechanism. Price is influenced by the market forces of demand and supply. These forces help to decide what, how and for whom to produce.

#### **How are fundamental problems solved in the planned economy?**

In a planned economy all the economic decisions regarding what, how and for whom to produce are solved by the state through planning. Economic planning replaces the price mechanism. The market is regulated by the state. The prices of the various products are fixed by the state called administered prices.

## UNIT 2: CONSUMER EQUILIBRIUM AND DEMAND

### KEY CONCEPTS

1. UTILITY
  - A) MARGINAL UTILITY
  - B) LAW OF DIMINISHING MARGINAL UTILITY
2. CONDITIONS OF CONSUMER'S EQUILIBRIUM
3. INDIFFERENCE CURVE ANALYSIS
4. THE CONSUMER'S BUDGET
  - A) BUDGET SET
  - B) BUDGET LINE
5. PREFERENCES OF THE CONSUMER
  - A) INDIFFERENCE CURVE
  - B) INDIFFERENCE MAP
6. CONDITIONS OF CONSUMER'S EQUILIBRIUM
7. DEMAND
  - A) INDIVIDUAL DEMAND
  - B) MARKET DEMAND
  - C) DEMAND SCHEDULE
  - D) DEMAND CURVE
8. DETERMINANTS OF DEMAND
9. MOVEMENT ALONG THE DEMAND CURVE
  - A) EXTENSION
  - B) CONTRACTION
10. SHIFT IN THE DEMAND CURVE
  - A) INCREASE IN DEMAND
  - B) DECREASE IN DEMAND
11. MEASUREMENT OF PRICE ELASTICITY OF DEMAND
  - A) TOTAL EXPENDITURE METHOD
  - B) PROPORTIONATE METHOD
  - C) GEOMETRIC METHOD
12. FACTORS AFFECTING PRICE – ELASTICITY OF DEMAND

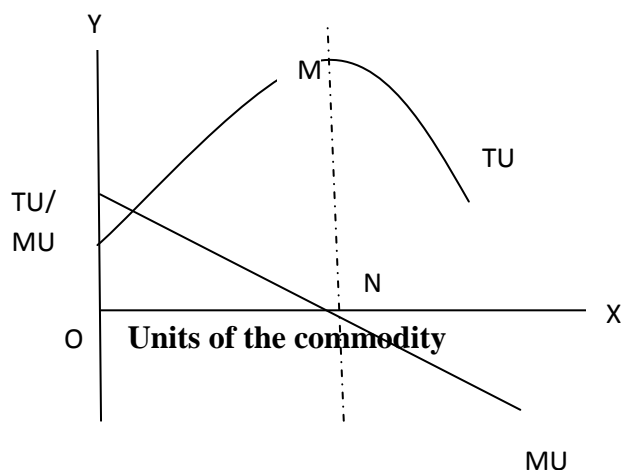
**Utility:-** The satisfaction which a consumer gets from using/consuming a good or service.

**Total Utility:-** The total satisfaction a consumer gets from a given commodity /service.

(or)

Sum of marginal utility is known as total utility

**Marginal Utility:-** An addition made to total utility by consuming an extra unit of commodity. Sum of marginal utilities derived from various goods is known as total utility.



**Graph -1: The relationship between TU and MU**

**Law of Diminishing Marginal Utility:-**

It states that as the consumer consumes more and more units of a commodity, the marginal utility derived from each successive units goes on diminishing.

Demand for a commodity refers to the quantity of a commodity which a consumer is willing to buy at a given price in a given period of time.

**Consumer Equilibrium:**

Refers to a situation when he spends his given income on purchase of a commodity ( or commodities) in such a way that yields him maximum satisfaction.

**Condition of equilibrium:**

MU in terms of money = Price.

MU of product / MU of a Rupee.= Price

**Consumer Equilibrium through Indifference Curve:-**

**Budget Set :-** Set of bundles ( combination of goods ) available to consumer

**Budget line:-** It refers to all combinations of goods which a consumer can buy with his entire income and price of two goods.

**Equation of Budget line:** -  $P_1 X_1 + P_2 X_2 = M$

**Indifference Curve: -**

**The combination of two goods which gives consumer same level of satisfaction**

**Properties of IC :-**

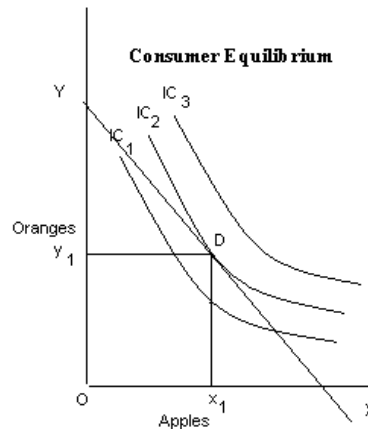
1. It slopes downwards from left to right
2. It is always convex to the origin due to falling of Marginal Rate of Substitution (MRS)
3. Higher IC always gives higher satisfaction
4. Two IC never intersect each other.

**Indifference Map:-** Group of indifference curves that gives different levels of satisfaction to the consumer.

**Marginal Rate of Substitution (MRS):-** It is the rate at which a consumer is willing to give up one good to get another good.

**Consumer Equilibrium:-**

At a point where budget line is tangent to the indifference curve,  $MRS = P_X / P_Y$ ,  
i.e., Marginal rate of substitution = ratio of prices of two goods.

**DEMAND**

**Demand:-** Quantity of the commodity that a consumer is able and willing to purchase in a given period and at a given price.

**Demand Schedule:-** It is a tabular representation which shows the relationship between price of the commodity and quantity purchased.

**Demand Curve:-** It is a graphical representation of demand schedule.

**Individual Demand:-** Demand by an individual consumer.

**Factors Affecting Individual Demand For a Commodity/Determinants of Demand:-**

1. Price of the commodity itself
2. Income of the consumer
3. Price of related goods
4. Taste and Preference
5. Expectations of future price change

**Demand Function:-**  $D_x = f(P_x, Y, P_r, T)$

**Substitute Goods:-** Increase in the price of one good causes increase in demand for other good. E.g., tea and Coffee

**Complementary Goods:-** Increase in the price of one good causes decrease in demand for other good. E.g:- Petrol and Car

**Normal Good:-** Goods which are having positive relation with income. It means when income rises, demand for normal goods also rises.

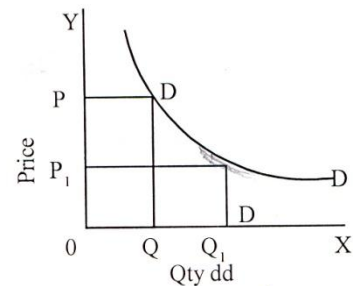
**Inferior Goods:-** Goods which are having negative relation with income. It means less demand at higher income and vice versa.

**Law of Demand:-** Other things remains constant, demand of a good falls with rise in price and vice versa .



### Demand Schedule:-

| PRICE (Rs.) | DEMAND (units) |
|-------------|----------------|
| 1           | 100            |
| 2           | 80             |
| 3           | 60             |
| 4           | 40             |
| 5           | 20             |



### Changes in Demand:-

They are of two types:

- 1) Change in Quantity Demanded (Movement along the same demand curve)
- 2) Change in Demand (Shifts in demand)

#### 1) **Change in Quantity Demanded: -**

Demand changes due to change in price of the commodity alone, other factors remain constant; are of two types;

- A) Expansion of demand : More demand at a lower price
- B) Contraction of demand : Less demand at a higher price

| Change in Quantity Demanded   | Change in Demand   |
|---|--|
| <p>Due to price change</p> <p>Movement will takes place</p> <p>Extension and contraction</p> <p style="text-align: center;">Diagram</p> | <p>Due to other than price change</p> <p>Shifting will takes place</p> <p>Increase and decrease</p> <p style="text-align: center;">Diagram</p> |

## 2) Change in demand:-

Demand changes due to change in factors other than price of the commodity, are of two types:

- A) **Increase in demand**:- more demand due to change in other factors, price remaining constant.
- B) **Decrease in demand**:- less demand due to change in other factors, price remaining constant.

### Causes of Increase in Demand:-

1. Increase in Income.
2. Increase/ favorable change in taste and preference.
3. Rise in price of substitute good.
4. Fall in price of complementary good.

**Note: Increase in income causes increase in demand for normal good**

### Causes of Decrease in Demand:

1. Decrease in Income.
2. Unfavorable/Decrease in taste and preference
3. Decrease in price of substitute good.
4. Rise in price of complementary good.

**Note: Decrease in income causes Decrease in demand for normal good**

### Price Elasticity of Demand (Ed):

Refers to the degree of responsiveness of quantity demanded to change in its price.

Ed. = Percentage change in quantity demanded/ Percentage change in price

$$Ed. = P/q \times \Delta q / \Delta p$$

P = Original price

Q = Original quantity

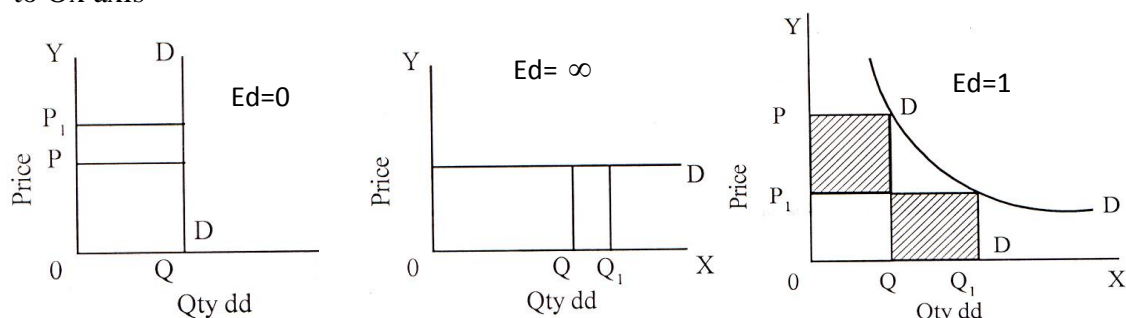
$\Delta$  = Change

**Q. Explain the five degrees of elasticity of demand?**

**Ans.**

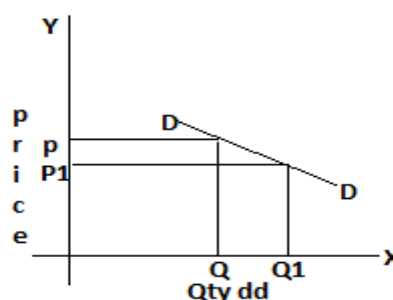
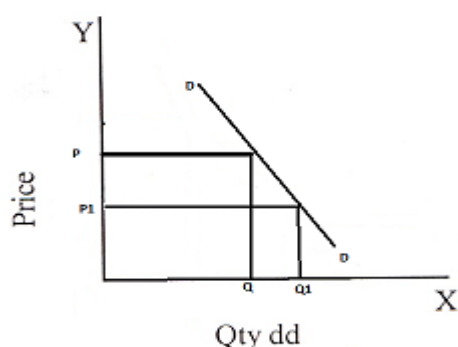
1. **Perfectly inelastic demand**: - Even with change in price, there is no change in the quantity demanded, the demand is said to be perfectly inelastic  $E_d = 0$ . The demand curve is parallel to OY axis.

2. **Perfectly elastic demand:** - Even with no change in price there is a great change in qty. Demanded, then the demand is said to be perfectly elastic. The demand curve is parallel to Ox axis

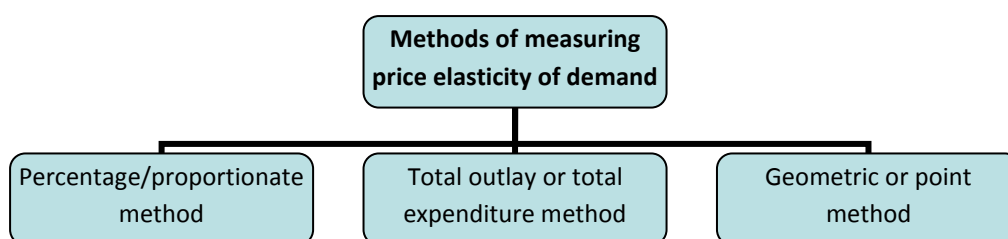


decrease in price, there is unit increase or decrease in quantity demanded. The demand curve resembles a rectangular hyperbola.

4. **Relatively less elastic:** With a unit increase in price, the quantity demanded is proportionately less, then demand is said to be less elastic
5. **Relatively more elastic:** With a unit increase in the price, there is proportionately more increase in the quantity demanded. The demand is said to be more elastic.



### Methods of Measuring Price Elasticity of Demand:-



### Proportionate / Percentage Method:

$$E_d = \frac{\% \text{ change in Quantity demanded}}{\% \text{ change in price}} = \frac{\Delta Q/Q_0 \times 100}{\Delta P/P_0 \times 100}$$

OR

$$= \Delta Q / \Delta P \times P / Q$$

**Q. The Price of ice cream is Rs.20 per cup and demand is for 200 cup. If the price of ice cream falls to Rs.15 demand increases to 300 cups. Calculate elasticity of demand.**

Sol.:  $P = 20; P_1 = 15 ; \Delta P = 5$   
 $Q = 200; Q_1 = 300; \Delta Q = 100$   

$$E_d = \frac{100}{5} \times \frac{20}{200} = 2$$

**Total Outlay Method (Expenditure Method)**

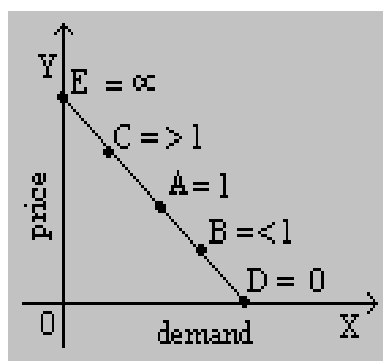
If with the fall in price, total outlay increases elasticity of demand is greater than one, if total outlay remain constant, elasticity is equal to one and if the total outlay decreases elasticity is less than one.

| Situation | Price of Commodity (Rs) | Quantity (Kg) | Total Expenditure (Rs) | Effect on Total Expenditures | Elasticity of Demand              |
|-----------|-------------------------|---------------|------------------------|------------------------------|-----------------------------------|
| A         | 2                       | 4             | 8                      | Same Total Expenditure       | Unitary Elastic<br>$E_d = 1$      |
|           | 1                       | 8             | 8                      |                              |                                   |
| B         | 2                       | 4             | 8                      | Total Expenditure increases  | Greater than unitary<br>$E_d > 1$ |
|           | 1                       | 10            | 10                     |                              |                                   |
| C         | 2                       | 3             | 6                      | Total Expenditure decreases  | Less than unitary $E_d < 1$       |
|           | 1                       | 4             | 4                      |                              |                                   |

**Geometric / Point Method: -**

This measures the elasticity of demand at different points on the same demand Curve.

$$E_d = \frac{\text{lower segment of the demand curve}}{\text{Upper segment of the demand curve}}$$



### **ONE MARK QUESTIONS AND ANSWERS**

**1. What do you mean by utility?**

Ans :- Utility is the **want satisfying power** of a commodity.

**2. How is total utility derived from marginal utility?**

Ans :- Total utility is the **sum total of marginal utilities** of various units of a commodity.

$$TU_n = MU_1 + MU_2 + MU_3 + \dots + MU_n$$

**3. State the law of equi-marginal utility.**

Ans :- It states that a consumer gets maximum satisfaction when the ratio of the marginal utilities of two goods and their prices is equal i.e.,  $MU_x / P_x = MU_y / P_y$

**4. What will you say about MU when TU is maximum?**

Ans :- MU is zero when TU is maximum

**5. Give the reason behind a convex indifference curve.**

Ans :- Diminishing marginal rate of substitution.

### **HOTS QUESTIONS**

**1. Give the formula for calculating the slope of the budget line.**

Ans :- It is equal to the ratio of the prices of the two commodities , i.e.,  $P_x / P_y$

**2. Suppose a consumer's preferences are monotonic. What can you say about his preference ranking over the bundles (10,10),(10,9) and (9,9)?**

Ans :- Consumer will monotonically prefer bundle (10,10) to (10,9) and (9,9) and also prefer bundle (10,9) to (9,9)

**3. A rise in the income of the consumer leads to a fall in the demand for commodity 'x'. What type of good is commodity 'x'?**

Ans :- Inferior good

**4. What do you mean by substitute and complementary goods? Give two examples each.**

Ans :- Substitute goods are those goods which can be used in place of each other. Ex. Tea and Coffee. Complementary goods are those goods which are used together to satisfy a given want. Ex : Car and petrol.

**5. Mention one factor that causes a leftward shift of the demand curve.**

Ans :- Fall in income of a consumer.

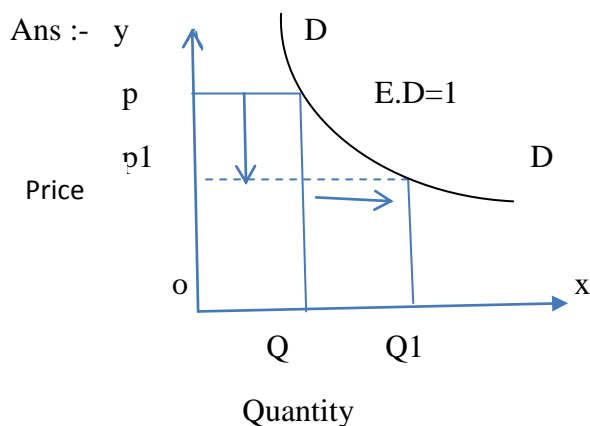
**6. What causes a movement along the demand curve of a commodity?**

Ans :- When the price of a commodity changes and other factors remain constant, there will be movement along the demand curve.

**7. What is demand function?**

Ans: - A demand function shows the functional relationship between the quantity demanded and the factors on which demand depends on.

**8. Draw a demand curve with unitary elasticity.**



**9. Define price elasticity of demand.**

Ans :- It refers to the degree of responsiveness of quantity demanded to change in price.

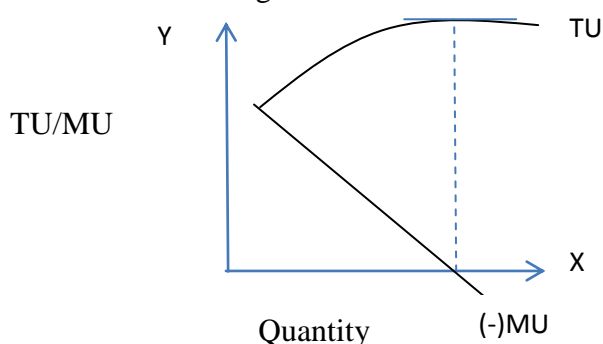
**3 AND 4 MARKS QUESTIONS & ANSWERS**

**1. Explain the law of Diminishing Marginal Utility with the help of a table and a diagram.**

Ans :- The law of diminishing Marginal Utility states that as we consume more and more units of a commodity, the MU derived from the successive units of that commodity goes on decreasing. It is explained with the help of following schedule and diagram.

| UNITS | TU | MU |
|-------|----|----|
| 1     | 8  | 8  |
| 2     | 14 | 6  |
| 3     | 18 | 4  |
| 4     | 20 | 2  |
| 5     | 20 | 0  |
| 6     | 18 | -2 |

Diagram:



### **Relationship between MU and TU:**

- i) When MU is positive TU rises.
- ii) When MU is zero TU is maximum.
- iii) When MU is negative, TU falls.

### **2. What is meant by consumer's equilibrium? State its conditions in case of two commodities approach.**

- a) **Meaning:** A consumer is to be equilibrium when he is spending his given income on various goods and services to get maximum satisfaction.
- b) **Conditions:**
  - i)  $MU_x / P_x = MU_y / P_y$  (MUs are equal to their prices)
  - ii)  $P_x Q_x + P_y Q_y = M$
  - iii) M ( Money spent is equal to income)

### **3. What is the difference between cardinal and ordinal utility analysis.**

|   | <b>Cardinal Utility</b>             | <b>Ordinal Utility</b>                            |
|---|-------------------------------------|---|
| 1 | Given by Prof. Alfred Marshall      | Given by Prof. J.R. Hicks                         |
| 2 | Utility can be measured numerically | It cannot be measured numerically                 |
| 3 | Unit of measurement is 'utils'      | Possible for a consumer to scale his preferences. |

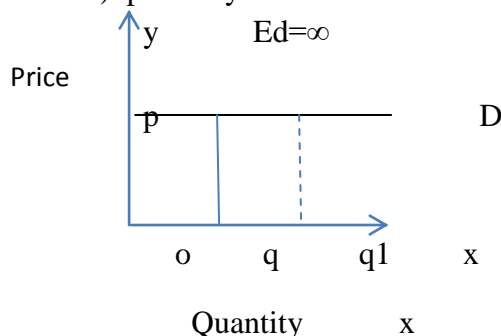
### **4. Explain any four determinants of demand for a commodity.**

Ans :- Following are the three determinants of demand for a commodity.

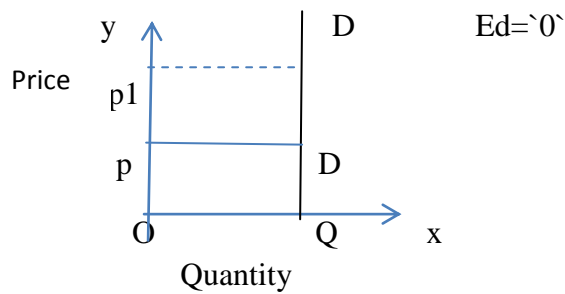
- i) **Price of the commodity:-** When the price of a commodity increases the demand for that commodity decreases and vice versa.
- ii) **Income of the consumer:-** When the income increases the demand for normal commodity also increases and vice-versa.
- iii) **Price of related goods :-**
  - a) In complementary goods demand rises with fall in price of complementary goods.
  - iv) In substitute goods demand for a commodity falls with a fall in the price of other substitute goods
  - b) Taste & preference of the consumer: With favourable taste, demand increase and unfavourable taste demand decreases for a commodity.

### **5. Draw a) perfectly elastic demand curve, b) perfectly inelastic demand curve and c) unitary elastic demand curve.**

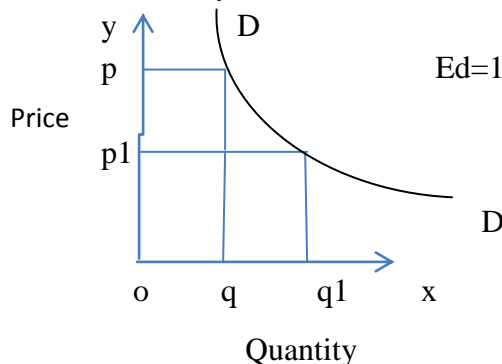
Ans :- a) perfectly elastic demand



b). Perfectly inelastic demand



c) Unitary elastic demand



6. Explain any four factors that affect elasticity of demand.

Ans :- Following are the factors affecting price elasticity of demand.

1. **Availability of close substitutes:** If close substitutes of product are available, the commodity tends to be more elastic, If there are not available, they tend to be less elastic.
2. **Proportion of total expenditure spent on the product:** If the amount spent on a product constitutes a very small fraction of the total expenditure, then the demand tends to be less elastic of the amount spent is high the elasticity of demand tends to be high.
3. **Habits:** A commodity if it forms an essential part of the individual, the demand tends to be inelastic. It is consumed casually; the demand tends to be elastic
4. **Time Period:** Longer the time period, the more elastic is the demand for any product the shorter the time period, less elastic is the demand for any products

### HOTS

1. Is the demand for the following elastic, moderate elastic, highly elastic? Give reasons.

- (i) Demand for petrol
- (ii) Demand for text books
- (iii) Demand for cars
- (iv) Demand for milk



Ans :- i) Demand for petrol is moderately elastic , because when the price of the petrol goes up , the consumer will reduce the use of it.

ii) Demand for text books is completely inelastic. In case of text books, even a substantial change in price leaves the demand unaffected.

iii) Demand for cars is elastic. It is a luxury good, when the price of the car rises, the demand for the car comes down.

iv) Demand for milk is elastic, because price of the milk increases then the consumer purchase less quantity milk.

## 2. What is the relationship between slope and elasticity of a demand curve?

Ans :- The formula of  $E_d = \Delta Q / \Delta P * P / Q$

The formula for the slope of the demand curve is, slope =  $\Delta P / \Delta Q$

The relationship between slope and elasticity of demand is  $E_d = 1/\text{slope} * P/Q$

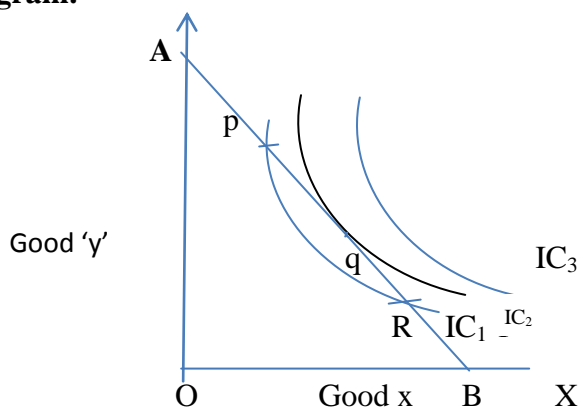
## 6 MARKS QUESTIONS

### 3. How is equilibrium achieved with the help of indifference curve analysis?

Ans :-

a) **Definition:** In the indifference curve approach, consumer's equilibrium is achieved at the point at which the budget line is tangent to a particular indifference curve. This is the point of maximum satisfaction.

b) **Diagram:**



c) **Explanation of the diagram:**

i) 'AB' is the budget line.

ii) It is sure that consumer's equilibrium will lie on some point on 'AB'

iii) Indifference map (set of IC<sub>1</sub>, IC<sub>2</sub>, IC<sub>3</sub>) shows consumers scale of preferences between different combinations of good 'x' and good 'y'

iv) Consumers' equilibrium will achieve where budget line (AB) is tangent to the IC<sub>2</sub>.

d) **Essential conditions for consumers equilibrium:**

i) Budget line must be tangent to indifference curve i.e.,  $MRS_{xy} = P_x / P_y$

ii) Indifference curve must be convex to the origin or  $MRS_{xy}$  should decrease.

**e) Consumers cannot achieve the following:**

- i) P and R points on budget line give satisfaction but they lie on lower indifference curve  $IC_1$ . Choosing point 'q' puts him on a higher IC which gives more satisfaction.
- ii) He cannot move on  $IC_3$ , as it is beyond his money income.

**4. Explain the factors affecting the market demand of a commodity.**

Ans :- i) **Meaning:** Market demand is the aggregates of the quantities demanded by all the consumers in the market at different prices.

**ii) Factors affecting market demand :**

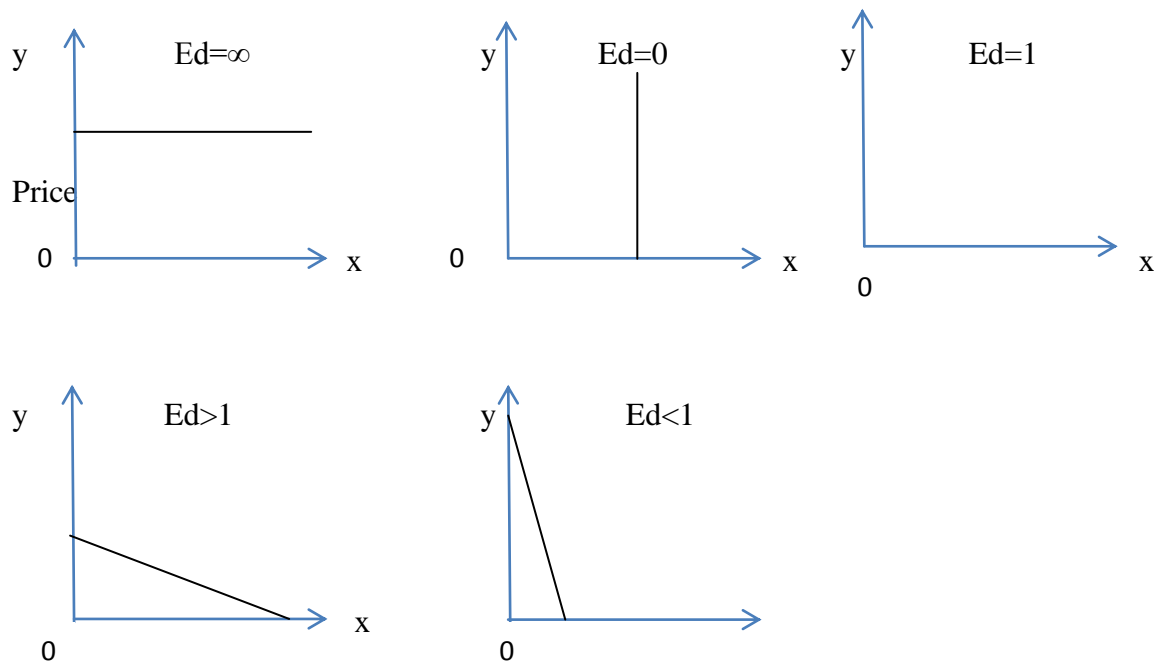
- a) Price of the commodity: When the price goes up demand for it falls and vice-versa.
- b) Income of the consumers: When the income of the consumers goes up the demand for a commodity also goes up.
- c) Price of related goods :
  - Complementary goods : The demand for a commodity rises with a fall in the price of its complementary good (Car and petrol)
  - Substitute goods: Demand for a commodity falls with a fall in the price of other substitute good (Tea & Coffee).
- d) Tastes and preferences: Any favourable change in consumers' tastes will lead to increase in market demand and any unfavourable change in consumers' tastes will lead to decrease in market demand.
- e) Consumer's group: More the consumers more will be market demand and vice-versa.

**5. Explain the various degrees of price elasticity of demand with the help of diagrams.**

Ans:- There are five degrees of price elasticity of demand. They are,

- a) Perfectly elastic demand ( $E_d = \infty$ ): - a slight or no change in the price leads to infinite changes in the quantity demanded.
- b) Perfectly Inelastic demand ( $E_d = 0$ ): - Demand of a commodity does not change at all irrespective of any change in its price.
- c) Unitary elastic demand ( $E_d = 1$ ): - When the percentage change in demand (%) of a commodity is equal to the percentage change in price.
- d) Greater than unitary elastic demand ( $E_d > 1$ ): - When percentage change in demand of a commodity is more than the percentage change in its price.
- e) Less than unitary elastic demand ( $E_d < 1$ ): - When percentage change in demand of a commodity is less than the percentage change in its price.

### Diagrams



### Numerical for practice

**6. Derive the total utility schedule from the marginal utility.**

| Units consumed | Marginal utility |
|----------------|------------------|
| 1              | 12               |
| 2              | 11               |
| 3              | 8                |
| 4              | 6                |
| 5              | 3                |
| 6              | 0                |

**7. A consumer buys 50 units of a good at Rs. 4/- per unit. When its price falls by 25 percent its demand rises to 100 units. Find out the price elasticity of demand.**

Ans:-  $Ed=4$

**8. Price elasticity of demand for wheat is equal to unity and a household demands 40 Kg of wheat when the price is Rs.1 per kg. At what price will the household demand 36 kg of wheat?**

Ans:- The price of wheat rises to Rs.1.10 per kg.

**9. The quantity demanded of a commodity at a price of Rs.10 per unit is 40 units. Its price elasticity of demand is -2. Its price falls by Rs.2/- per unit. Calculate its quantity demanded at the new price.**

Ans :- 56 units.

## **FREQUENTLY ASKED QUESTIONS – CBSE BOARD EXAMINATIONS**

1. Define Microeconomics.
2. Why an economic problem does arises?
3. What are the central problems of an economy?
4. Define opportunity cost.
5. Define marginal opportunity cost.
6. Distinguish between 'micro' and 'macro' economics.
7. Why PPC is Concave from the origin.
8. Define Marginal Rate of Transformation (MRT)
9. Explain the problem, of 'what to produce' and 'how to produce.'
10. Explain the central problem of how to produce with the help of an example.
11. What is an indifference curve?
12. Define Utility.
13. What is budget set?
14. Define budget line.
15. Define MRS.
16. A consumer consumes only two goods. Explain the conditions of consumer's equilibrium with the help of IC analysis.
17. For a consumer to be in equilibrium, why must MRS be equal to the ratio of price of two goods?
18. What is an indifference map?
19. Explain the law of demand with the help of diagram and schedule.
20. Write three causes of increase / decrease in demand
21. Distinguish between the change in quantity demanded and change in demand.
22. Explain any three factors or determinants of demand.
23. Explain any three factors affecting elasticity of demand
24. Explain the price elasticity of demand through geometric method.
25. Explain the price elasticity of demand through expenditure method
26. Explain the properties of indifference curve.
27. Why can not two indifference curves meet each other?
28. Why is indifference curve convex to origin?
29. Why does higher indifference curve gives higher levels of satisfaction?

\*\*\*\*\*

### UNIT 3: PRODUCER BEHAVIOUR AND SUPPLY

**Production:** Combining inputs in order to get the output is production.

**Production Function:** It is the functional relationship between inputs and output in a given state of technology.  $Q = f(L, K)$

Q is the output, L: Labor, K: Capital

**Fixed Factor:** The factor whose quantity remains fixed with the level of output.

**Variable Factor:** Those inputs which change with the level of output.

| Capital | Labor | Output |
|---------|-------|--------|
| 10      | 1     | 50     |
| 10      | 2     | 70     |
| 10      | 3     | 82     |
| 10      | 4     | 92     |
| 10      | 5     | 100    |

Here units of capital used remain the same for all levels of output. Hence it is the fixed factor.

Amount of labor increases as output increases. Hence it is a variable factor.

### PRODUCTION FUNCTION AND TIME PERIOD

1. Production function is a long period production function if all the inputs are varied.
2. Production function is a short period production function if few variable factors are combined with few fixed factors.

### CONCEPTS

**Time period, can be classified as:**

1. Very short period or market period
2. Short period / short run
3. Long period / long run

**Market period** : is that period where supply / output cannot be altered or changed.

**Short period /run** : is that period where supply / output can be altered / changed by changing only variable factors of production. In other words fixed factors of production remain fixed.

**Long period** : is that period where all factors of production are changed to bring about changes in output / supply. No factor is fixed.

### Difference between short run & long run :

| Basis               | Short Run                                   | Long Run                                     |
|---------------------|---|--|
| Meaning             | Only variable factors are changed           | All factors are changed                      |
| Price Determination | Demand is active.                           | Both demand & supply play an important role. |
| Classification      | Factors are classified as fixed & variable. | All factors are variable.                    |

Concept of product :- Refers to volume of goods produced by a firm or an industry during a specific period of time.

### Concepts of product:

Total Product- Total quantity of goods produced by a firm / industry during a given period of time with given number of inputs.

Average product = output per unit of variable input.

$APP = TPP / \text{units of variable factor}$

Average product is also known as average physical product.

Marginal product (MP): refers to addition to the total product, when one more unit of variable factor is employed.

$$MP_n = TP_n - TP_{n-1}$$

$MP_n$  = Marginal product of nth unit of variable factor

$TP_n$  = Total product of n units of variable factor

$TP_{n-1}$  = Total product of (n-1) unit of variable factor.

n=no. of units of variable factor

$$MP = \Delta TP / \Delta n$$

We derive TP by summing up MP

$$TP = \sum MP$$

### LAW OF VARIABLE PROPORTION OR RETURNS TO A VARIABLE FACTOR

**Statement of law of variable proportion:** In short period, when only one variable factor is increased, keeping other factors constant, the total product (TP) initially increases at an increasing rate, then increases at a decreasing rate and finally TP decreases.

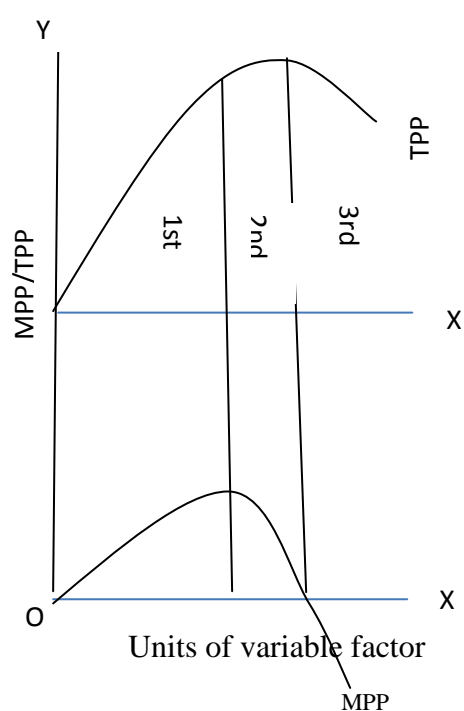
**MPP initially increase then falls but remains positive then 3<sup>rd</sup> phase becomes negative.**

## Explanation of law of variable proportion with a schedule and a diagram

Schedule of Law of variable proportion

| Fixed factor  | Variable factor | Total product | Marginal product | Phase                                |
|---------------|-----------------|---------------|------------------|--------------------------------------|
| Land in acres | Labour          | Units         | Units            |                                      |
| 1             | 0               | 0             | -                | I - Increasing returns to a factor   |
| 1             | 1               | 5             | 5                |                                      |
| 1             | 2               | 15            | 10               |                                      |
| 1             | 3               | 30            | 15               |                                      |
| 1             | 4               | 40            | 10               | II – diminishing returns to a factor |
| 1             | 5               | 45            | 5                |                                      |
| 1             | 6               | 45            | 0                |                                      |
| 1             | 7               | 40            | -5               | III - Negative returns to a factor   |

Diagram



### Phase I / Stage I / Increasing returns to a factor.

- TPP increases at an increasing rate
- MPP also increases.

### Phase II / Stage II / Diminishing returns to a factor

- TPP increases at decreasing rate
- MPP decreases / falls
- This phase ends when MPP is zero & TPP is maximum

### Phase III / Stage III / Negative returns to a factor

- TPP diminishes / decreases
- MPP becomes negative.

### Reasons for increasing returns to a factor

- Better utilization of fixed factor
- Increase in efficiency of variable factor.
- Optimum combination of factors

### Reasons for diminishing returns to a factor

- Indivisibility of factors.
- Imperfect substitutes.

### Reasons for negative returns to a factor

- Limitation of fixed factors
- Poor coordination between variable and fixed factor
- Decrease in efficiency of variable factors.

### Relation between MPP and TPP

- As long as MPP increases, TPP increases at an increasing rate.
- When MPP decreases, TPP increases diminishing rate.
- When MPP is Zero, TPP is maximum.
- When MPP is negative, TPP starts decreasing.

### Short answer questions and Long answer questions

#### **1. What is meant by production?**

Ans :- Transformation of Input into Output.

#### **2. What will be MP when TP is maximum?**

Ans :- MP will be zero.

#### **3. Define market period, Short run & Long run.**

Ans :- Refer time period.

#### **4. Explain the law of variable proportions with the help of a schedule and a diagram**

6 Marks

#### **5. What are the reasons for**

6 Marks

- a) Increasing returns to a factor
- b) Diminishing returns to a factor
- c) Negative returns to a factor

#### **6. Explain the difference between MPP & TPP.**

4 Marks



## HOTS

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

**1. When there are diminishing returns to a factor, total product always decreases.**

Ans :- False. When there is diminishing returns to a factor, TPP increases at a decreasing rate.

**2. TPP increases only when MPP increases.**

Ans :- False. TPP also increases when MPP decreases but remains positive.

**3. Increase in TPP always indicates that there are increasing returns to a factor.**

Ans :- False. TPP increases even when there are diminishing returns to a factor.

**4. When there are diminishing returns to a factor marginal and total products always fall.**

Ans: - False. Only MPP falls, not TPP. In case of diminishing returns to a factor, TPP increase at diminishing rate.

**5. Calculate MP for the following.**

|                      |   |   |    |    |    |    |    |
|----------------------|---|---|----|----|----|----|----|
| Variable factor unit | 0 | 1 | 2  | 3  | 4  | 5  | 6  |
| TP (unit)            | 0 | 5 | 13 | 23 | 28 | 28 | 24 |

Ans :- MP:        0        5        8        10        5        0        -4

## COST

**Cost of production** : Expenditure incurred on various inputs to produce goods and services.

**Cost function** : Functional relationship between cost and output.

$$C=f(q)$$

Where f=functional relationship

c= cost of production

q=quantity of product

**Money cost** : Money expenses incurred by a firm for producing a commodity or service.

**Explicit cost** : Actual payment made on hired factors of production. For example wages paid to the hired labourers, rent paid for hired accommodation, cost of raw material etc.

**Implicit cost** : Cost incurred on the self - owned factors of production.

For example, interest on owners capital, rent of own building, salary for the services of entrepreneur etc.

**Opportunity cost** : is the cost of next best alternative foregone / sacrificed.

**Fixed cost** : are the cost which are incurred on the fixed factors of production.

These costs remain fixed whatever may be the scale of output. These costs are present even when the output is zero.

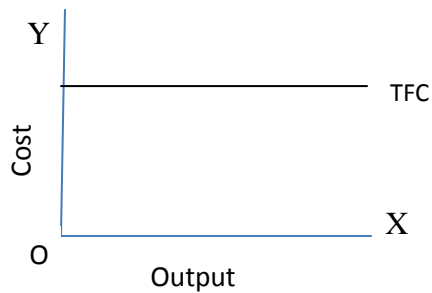
These costs are present in short run but disappear in the long run.

*Numerical example of fixed cost*

|        |    |    |    |    |    |    |
|--------|----|----|----|----|----|----|
| Output | 0  | 1  | 2  | 3  | 4  | 5  |
| TFC Rs | 20 | 20 | 20 | 20 | 20 | 20 |

TFC = Total Fixed Cost

Diagrammatic presentation of TFC



TFC is also called as “overhead cost”, “supplementary cost”, and “unavoidable cost”.

**Total Variable Cost** : TVC or variable cost – are those costs which vary directly with the variation in the output. These costs are incurred on the variable factors of production.

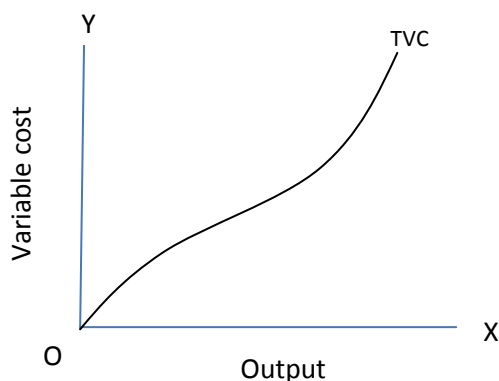
These costs are also called “prime costs”, “Direct cost” or “avoidable cost”.

These costs are zero when output is zero.

*Numerical example,*

|        |   |    |    |    |    |    |
|--------|---|----|----|----|----|----|
| Output | 0 | 1  | 2  | 3  | 4  | 5  |
| TVC    | 0 | 10 | 16 | 25 | 38 | 55 |

Diagrammatic presentation of TVC



### Difference between TVC & TFC

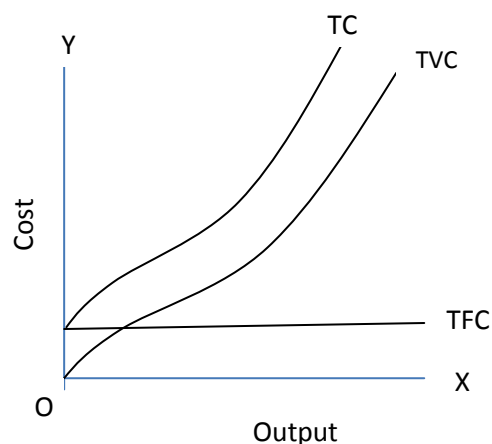
| Basis                   | TVC                                   | TFC  |
|-------------------------|---------------------------------------|--|
| Meaning                 | Vary with the level of output         | Do not vary with the level of output         |
| Time period             | Can be changed in short period        | Remain fixed in short period                 |
| Cost at zero output     | Zero                                  | Can never be zero                            |
| Factors of production   | Cost incurred on all variable factors | Cost incurred on fixed factors of production |
| Shape of the cost curve | Upward sloping                        | Parallel to x axis                           |

**Total cost** : is the total expenditure incurred on the factors and non-factor inputs in the production of goods and services.

It is obtained by summing TFC and TVC at various levels of output.

### Relation between TC, TFC and TVC

1. TFC is horizontal to x axis.
2. TC and TVC are S shaped (they rise initially at a decreasing rate, then at a constant rate & finally at an increasing rate) due to law of variable proportions.
3. At zero level of output TC is equal to TFC.
4. TC and TVC curves parallel to each other.



- $TC = TFC + TVC$
- $TFC = TC - TVC$
- $TVC = TC - TFC$

**Average cost** : are the “cost per unit” of output produced.

**Average fixed cost** is the per unit fixed cost of production.

$AFC = TFC / Q$  or output

AFC declines with every increase in output. It's a rectangular hyperbola. It goes very close to x axis but never touches the x axis as TFC can never be zero.

**Average variable cost** is the cost per unit of the variable cost of production.

$AVC = TVC / \text{output}$ .

AVC falls with every increase in output initially. Once the optimum level of output is reached AVC starts rising.

Average total cost (ATC) or Average cost (AC) : refers to the per unit total cost of production.

$ATC = TC / \text{Output}$

$AC = AFC + AVC$

### **Phases of AC**

I phase : When both AFC and AVC fall , AC also fall

II phase : When AFC continue to fall , AVC remaining constant AC falls till it reaches minimum.

III phase : AC rises when rise in AVC is more than fall in AVC.

### **Important observations of AC , AVC & AFC**

1. AC curve always lie above AVC (because AC includes AVC & AFC at all levels of output).
2. AVC reaches its minimum point at an output level lower than that of AC because when AVC is at its minimum AC is still falling because of fall in AFC.
3. As output increases, the gap between AC and AVC curves decreases but they never intersect.

**Marginal cost**: refers to the addition made to total cost when an additional unit of output is produced.

$$MC_n = TC_n - TC_{n-1}$$

$$MC = \Delta TC / \Delta Q$$

Note : MC is not affected by TFC.

### **Relationship between AC and MC**

- Both AC & MC are derived from TC
- Both AC & MC are “U” shaped (Law of variable proportion)
- When AC is falling MC also falls & lies below AC curve.
- When AC is rising MC also rises & lies above AC
- MC cuts AC at its minimum where  $MC = AC$

### **Important formulae at a glance**

1.  $TFC = TC - TVC$  or  $TFC = AFC \times \text{output}$  or  $TFC = TC$  at 0 output.
2.  $TVC = TC - TFC$  or  $TVC = AVC \times \text{output}$  or  $TVC = \sum MC$
3.  $TC = TVC + TFC$  or  $TC = AC \times \text{output}$  or  $TC = \sum MC + TFC$
4.  $MC_n = TC_n - TC_{n-1}$  or  $MC_n = TVC_n - TVC_{n-1}$
5.  $AFC = TFC / \text{Output}$  or  $AFC = AC - AVC$  or  $ATC - AVC$
6.  $AVC = TVC / \text{Output}$  or  $AVC = AC - AFC$
7.  $AC = TC / \text{Output}$  or  $AC = AVC + AFC$

### **Short answers and Long Answer questions:**

1. What is cost of production?
2. Define cost function.
3. What are money costs?
4. Distinguish between explicit and implicit costs.
5. How do you define an opportunity cost?
6. What difference you find between fixed and variable costs?
7. Why the fixed cost curve is a horizontal straight line to the X axis?
8. Why variable costs are variable?
9. What is average cost? How do you derive it?
10. Explain AVC, AFC & ATC and explain the relationship between these costs.
11. Explain the relationship TC, TFC & TVC.
12. With a diagram describe the various phases of AC.
13. Bring out the relationship between AC & MC

### **HOTS**

#### **1. Why AFC curve never touches 'x' axis though it lies very close to x axis?**

Ans :- Because TFC can never be zero.

#### **2. Why AVC and AFC always lie below AC?**

Ans:- AC is the summation of AVC & AFC so AC always lies above AVC & AFC.

#### **3. Why TVC curve start from origin?**

Ans:- TVC is zero at zero level of output.

#### **4. When TVC is zero at zero level of output, what happens to TFC or Why TFC is not zero at zero level of output?**

Ans:- Fixed cost are to be incurred even at zero level of output.

### **Revenue**

**Revenue**:- Money received by a firm from the sale of a given output in the market.

**Total Revenue**: Total sale receipts or receipts from the sale of given output.

$$TR = \text{Quantity sold} \times \text{Price} \quad (\text{or}) \quad \text{output sold} \times \text{price}$$

**Average Revenue**: Revenue or Receipt received per unit of output sold.

- $AR = TR / \text{Output sold}$
- AR and price are the same.
- $TR = \text{Quantity sold} \times \text{price or output sold} \times \text{price}$
- $AR = (\text{output} / \text{quantity} \times \text{price}) / \text{Output/ quantity}$
- $AR = \text{price}$

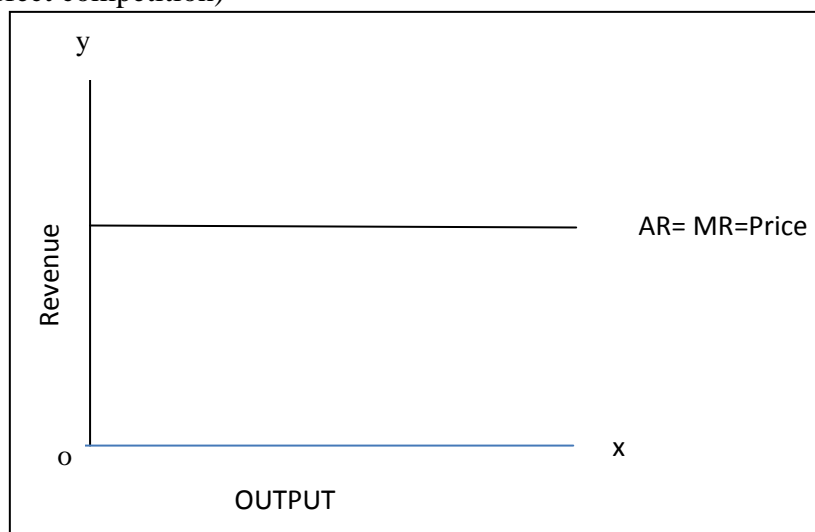
AR and demand curve are the same. Shows the various quantities demanded at various prices.

**Marginal Revenue**: Additional revenue earned by the seller by selling an additional unit of output.

- $MR_n = TR_n - TR_{n-1}$
- $MR_n = \Delta TR_n / \Delta Q$
- $TR = \sum MR$

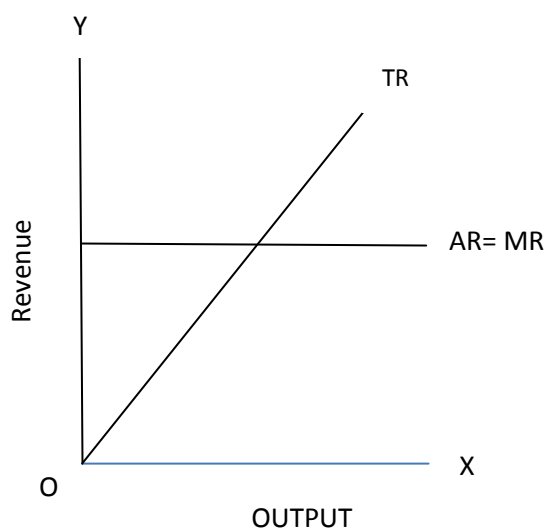
### **Relationship between AR and MR** (when price remains constant or perfect competition)

Under perfect competition, the sellers are price takers. Single price prevails in the market. Since all the goods are homogeneous and are sold at the same price  $AR = MR$ . As a result AR and MR curve will be horizontal straight line parallel to OX axis. (When price is constant or perfect competition)



### **Relation between TR and MR** (When price remains constant or in perfect competition)

When there exists single price, the seller can sell any quantity at that price, the total revenue increases at a constant rate (MR is horizontal to X axis)

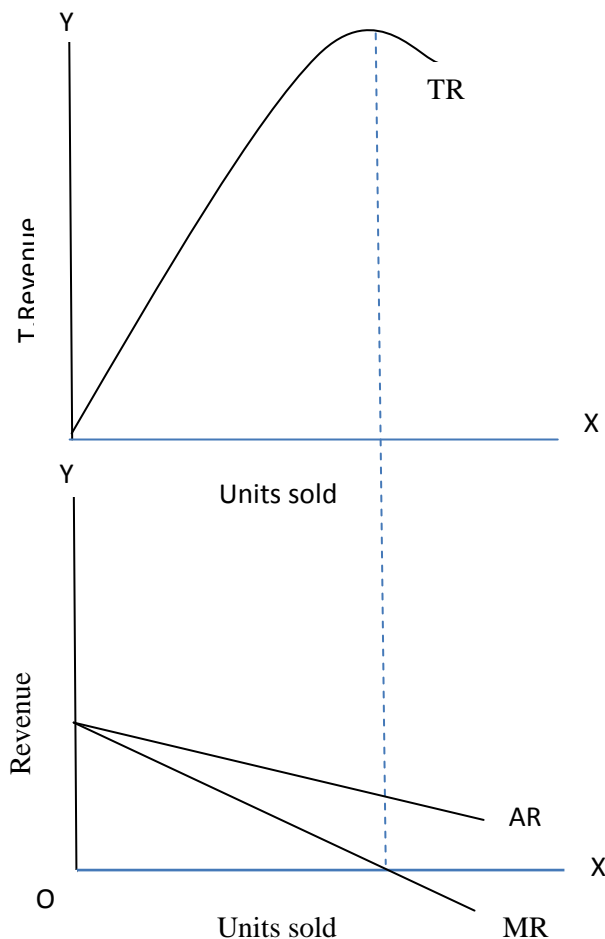


### **Relationships between AR and MR under monopoly and monopolistic competition** (Price changes or under imperfect competition)

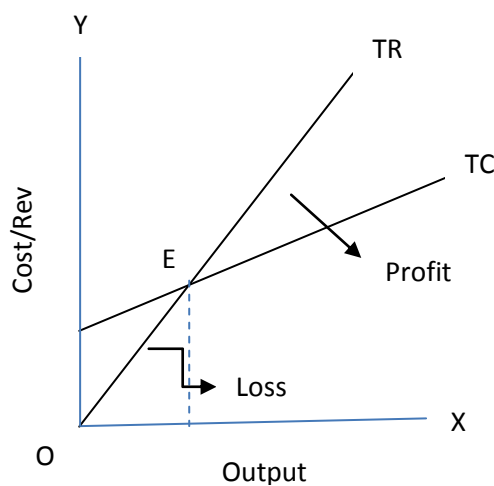
- AR and MR curves will be downward sloping in both the market forms.
- AR lies above MR.
- AR can never be negative.
- AR curve is less elastic in monopoly market form because of no substitutes.
- AR curve is more elastic in monopolistic market because of the presence of substitutes.

**Relationship between TR and MR.** (When price falls with the increase in sale of output)

- Under imperfect market AR will be downward sloping – which shows that more units can be sold only at a less price.
- MR falls with every fall in AR / price and lies below AR curve.
- TR increases as long as MR is positive.
- TR falls when MR is negative.
- TR will be maximum when MR is zero.



**Break-even point:** It is that point where  $TR = TC$  or  $AR = AC$ . Firm will be earning normal profit.



Point- E' Break-even point.

Below E' loses.

Any point above E' profits.

**Shut down point** : A situation when a firm is able to cover only variable costs or  $TR = TVC$

**Formulae at a glance:**

- $TR = \text{price or } AR \times \text{Output sold or } TR = \sum MR$
- $AR (\text{price}) = TR \div \text{units sold}$
- $MR_n = MR_n - MR_{n-1}$

**HOTS**

**1. Can MR be negative or zero.**

Ans:- Yes, MR can be zero or negative.

**2. If all units are sold at same price how will it affect AR and MR?**

Ans:- AR and MR will be equal at levels of output.

**3. What is price line?**

Ans:- Price line is the same as AR line and is horizontal to X-axis in perfect competition.

**4. Can TR be a horizontal Straight line?**

Ans:- Yes, when MR is zero.

**5. What do you mean by revenue?**

**6. Explain the concept of revenue ( TR, AR and MR)**

**7. Define AR**

**8. Prove that  $AR = \text{price}$**

**9. Prove that AR is nothing but demand curve.**

**10. Explain the relationships between AR and MR when price is constant and when price falls.**

**11. Explain the relationships between TR and MR when price is constant.**

**12. What is break- even point? Explain with a diagram.**

**13. When the situation of ‘shut – down’ point arises for a firm?**

**14. What happens to TR when a) MR is increasing, b) decreasing but remains positive and c) MR is negative?**

Ans:- a) TR increases at an increasing rate.  
b) TR increases at a diminishing rate.  
c) TR decreases.

**15. Why AR is more elastic in monopolistic competition than monopoly?**

Ans:- Monopolistic competition market has close substitutes. Monopoly market does not have close substitutes.

**16. Why TR is  $45^\circ$  angle in perfect competition market?**

Ans:- In perfect competition market the goods are sold at the same price so  $AR = MR$  and the TR increases at a constant rate.

**17. Can there be Break- even point with  $AR = AC$**

Ans:- Yes there can be breakeven point with  $AR = AC$ .



## CONCEPT OF SUPPLY

1. Individual supply refers to quantity of a commodity that an individual firm is willing and able to offer for sale at each possible price during a given period of time.
2. Market supply: It refers to quantity of a commodity that all the firms are willing and able to offer for sale at each possible price during a given period of time.
3. The supply curve of a firm shows the quantity of commodity (Plotted on the X-axis) that the firm chooses to produce corresponding to two different prices in the market (plotted on the Y-axis)
4. Supply Schedule refers to a table which shows various quantity of a commodity that a producer is willing to sell at different prices during a given period of time.
5. Determinants of supply are a) state of technology b) input prices c) Government taxation policy.
6. Law of supply: It states direct relationship between price and quantity supplied keeping other factors constant.
7. Movement along the supply curve: It occurs when quantity supplied changes due to change in its price, keeping other factors constant.
8. Shift in supply curve: It occurs when supply changes due to factors other than price.
9. Reasons for shift in supply curves: Change in price of other goods, change in price of factors of production, change in state of technology, change in taxation policy.
10. Expansion in supply: It occurs when quantity supplied rises due to increase in price keeping other factors constant.
11. Contraction of supply: It means fall in the quantity supplied due to fall in price keeping other factors constant.
12. Increase in supply refers to rise in the supply of a commodity due to favorable changes in other factors at the same price.
13. Decrease in supply: It refers to fall in the supply of a commodity due to unfavorable change in other factors at the same price.
14. Price elasticity of supply: The price elasticity of supply of a good measures the responsiveness of quantity supplied to changes in the price of a good.
15. Price elasticity of supply =  $\frac{\% \text{ change in qty supplied}}{\% \text{ change in price}}$ .
16. Geometric method:

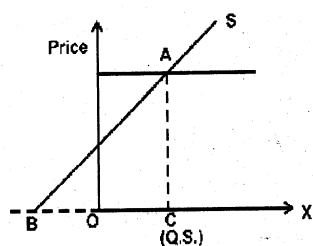


Fig. 1

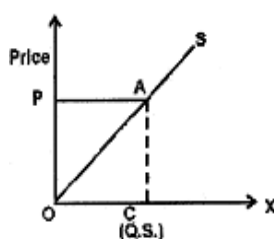


Fig. 2

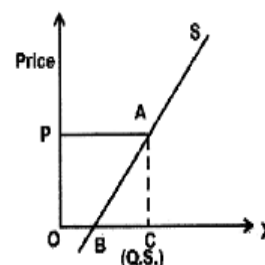


Fig.3

Es at a point on the supply curve =  $\frac{\text{Horizontal segment of the supply curve}}{\text{Quantity supplied}}$

**Fig.1:**  $BC/OC > 1$

**fig. 2:**  $BC/OC = 1$

**fig 3.**  $BC/OC < 1$

## **FREQUENTLY ASKED QUESTIONS – CBSE BOARD EXAMINATION**

### ***One Mark Questions (1M)***

1. Define the law of supply.
2. Define market supply.
3. What do you understand by supply curve of a firm?
4. What do you mean by elasticity of supply?
5. Define supply schedule.
6. Define revenue of a firm? OR give meaning of revenue?
7. Define Marginal Revenue?
8. What is Average revenue?
9. When will the marginal revenue become negative?
10. What happens to total revenue when Marginal revenue is zero?
11. In which market the Average revenue is equal to marginal Revenue?

### ***Three Marks Questions (3M)***

1. Give reasons for the rightward shift in supply curve?
2. Give reasons for the leftward shift in supply curve?
3. If the price of the commodity falls by 10 % and consequently the quantity supply decreases by 20 % what will be elasticity of supply?

### ***Four Marks Questions (4 M)***

1. Briefly explain the geometric method of measuring price elasticity of supply?
2. Distinguish between change in supply and change in quantity supplied?
3. Explain the movement along the supply curve?

### ***Three OR Four Marks Questions (3M/4M)***

- 1) What changes will take place in marginal Revenue when:
  - a) TR increase at an increasing rate?
  - b) TR increases at a diminishing rate?
- 2) Complete the following table:

| Units            | 1  | 2  | 3  | 4  | 5 | 6 |
|------------------|----|----|----|----|---|---|
| Total Revenue    | 20 | -  | -  | 56 | - | - |
| Average Revenue  | -  | 18 | -  | -  | - | - |
| Marginal Revenue | -  | -  | 12 | -  | 4 | 0 |

### ***Six Marks Questions (6 M)***

1. Explain the determinants of supply?
2. Explain the relationship between Total Revenue and marginal Revenue using a Schedule and diagram?

\*\*\*\*\*

### **UNIT – IV: FORMS OF MARKET AND PRICE DETERMINATION**

- Perfect Competition
- Monopoly
- Monopolistic competition
- Oligopoly

**Market** : Market is a place in which buyers and sellers come into contact for the purchase and sale of goods and services.

**Market structure**: refers to number of firms operating in an industry, nature of competition between them and the nature of product.

#### **Types of market**

- a) Perfect competition.
  - b) Monopoly.
  - c) Monopolistic Competition
  - d) Oligopoly.
- a) **Perfect competition**: refers to a market situation in which there are large number of buyers and sellers. Firms sell homogeneous products at a uniform price.
  - b) **Monopoly market**: Monopoly is a market situation dominated by a single seller who has full control over the price.
  - c) **Monopolistic competition**: It refers to a market situation in which there are many firms who sell closely related but differentiated products.
  - d) **Oligopoly**: is a market structure in which there are few large sellers of a commodity and large number of buyers.

#### **Features of perfect competition:**

1. Very large number of buyers and sellers.
2. Homogeneous product.
3. Free entry and exit of firms.
4. Perfect knowledge.
5. Firm is a price taker and industry is price maker.
6. Perfectly elastic demand curve (AR=MR)
7. Perfect mobility of factors of production.
8. Absence of transportation cost.
9. Absence of selling cost.

**Features of monopoly:**

1. Single seller of a commodity.
2. Absence of close substitute of the product.
3. Difficulty of entry of a new firm.
4. Negatively sloped demand curve( $AR > MR$ )
5. Full control over price.
6. Price discrimination exists
7. Existence of abnormal profit.

**Features of monopolistic competition**

1. Large number of buyers and sellers but less than perfect competition.
2. Product differentiation.
3. Freedom of entry and exit.
4. Selling cost.
5. Lack of perfect knowledge.
6. High transportation cost.
7. Partial control over price.

**Main features of Oligopoly.**

1. Few dominant firms who are large in size
2. Mutual interdependence.
3. Barrier to entry.
4. Homogeneous or differentiated product.
5. Price rigidity.

**Features of pure competition**

1. Large number of buyers and sellers.
2. Homogeneous products.
3. Free entry and exit of firm.

**DETERMINATION OF PRICE UNDER PERFECT COMPETITION**

**Equilibrium:** It means a position of rest, there is no tendency to change.

**Market equilibrium:** It means equality between quantity demanded and quantity supplied of a commodity in the market.

**Equilibrium price:** This is the price at which market demand of a commodity is exactly equal to the market supply.

**Market demand:** It refers to the sum total demand for a commodity by all buyers in the market.

**Market supply:** It refers to supply of a commodity by all the firms in the market

### **Very short answer questions**

**1. Define perfect competition.**

Ans:- Perfect competition is a market with large number of buyers and sellers , selling homogeneous product at same price.

**2. Define monopoly.**

Ans: Monopoly is a market situation dominated by a single seller who has full control over the price.

**3. Define monopolistic competition.**

Ans:- It refers to a market situation in which many buyers and sellers selling differentiated product and have partial control over the price.

**4. Under which market form firm is a price maker?**

Ans:- Monopoly

**5. What are selling cost?**

Ans:- Cost incurred by a firm for the promotion of sale is known as selling cost. (Advertisement cost)

**6. What is oligopoly?**

Ans:- Oligopoly is defined as a market structure in which there are few large sellers who sell either homogenous or differentiated goods.

**7. In which market form is there product differentiation?**

Ans:- Monopolistic competition market and oligopoly market.

**8. What is product differentiation?**

Ans: It means close substitutes offered by different producers to show their output differs from other output available in the market. Differentiation can be in colour, size packing, brand name etc to attract buyers.

**9. What do you mean by patent rights?**

Ans:- Patent rights is an exclusive right or license granted to a company to produce a particular output under a specific technology.

**10. What is price discrimination?**

Ans: - It refers to charging of different prices from different consumers for different units of the same product.

**11. What is the shape of marginal revenue curve under monopoly?**

Ans:- Under monopoly market MR curve is downwards sloping curve from left to right and it lies below the AR curve.

**12. What do you mean by abnormal profits?**

Ans:- It is a situation for the firm when  $TR > TC$ .

**13. Why AR is equal to MR under perfect competition?**

Ans:- AR is equal to MR under perfect competition because price is constant.

**14. What are advertisement costs?**

Ans:- Advertisement cost are the expenditure incurred by a firm for the promotion of its sales such as publicity through TV , Radio , Newspaper , Magazine etc.

**15. What is short period?**

Ans:- Short period refers to that much time period when quantity of output can be changed only by changing the quantity of variable input and fixed factors remaining same.

**16. Define long period.**

Ans:- Long period refers to that much time period available to a firm in which it can increase its outputs by changing its fixed and variable inputs.

**17. What is market period?**

Ans: Market period is defined as a very short time period in which supply of commodity cannot be increased.

**18. What is meant by normal profit?**

Ans:- Normal profit is the minimum amount of profit which is required to keep an entrepreneur in production in the long run.

**19. What is break-even price?**

ANs:-In a perfectly competitive market, break- even price is the price at which a firm earn normal profit (Price=AC). In the long run, Break- even price is that price where  $P=AR=MC$

**Short Answer Questions: (3 / 4 Marks)**

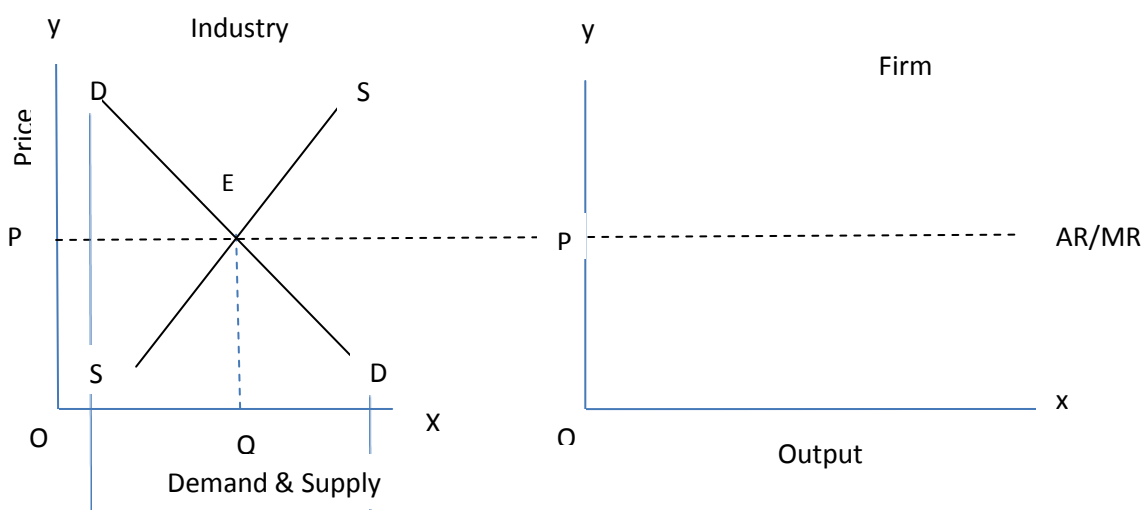
**1. Explain any four characteristics of perfect competition market.**

Ans:-

- i) Large number of buyers and sellers : The number of buyers and sellers are so large in this market that no firm can influence the price.
- ii) Homogeneous products: Products are uniform in nature. The products are perfect substitute of each other. No seller can charge a higher price for the product. Otherwise he will lose his customers.
- iii) Perfect knowledge: Buyers as well as sellers have complete knowledge about the product.
- iv) Free entry and exit of firm: Under perfect competition any firm can enter or exit in the market at any time. This ensures that the firms are neither earning abnormal profits nor incurring abnormal losses.

## 2. Explain briefly why a firm under perfect competition is a price taker not a price maker?

Ans:- A firm under perfect competition is a price taker not a price maker because the price is determined by the market forces of demand and supply. This price is known as equilibrium price. All the firms in the industry have to sell their outputs at this equilibrium price. The reason is that, number of firms under perfect competition is so large. So no firm can influence the price by its supply. All firms produce homogeneous product.



## 3. Distinguish between monopoly and perfect competition.

Ans:-

| Perfect Competition                         | Monopoly  |
|---|---|
| Very large number of buyers and sellers.    | Single seller of the product.                     |
| Products are homogenous                     | Product has no close substitute                   |
| Firm is the price taker and not a maker     | Firm is price maker not price taker               |
| Price is uniform in the market (price = AR) | Due to price discrimination price is not uniform. |
| Free entry and exit of firms.               | Very difficult entry of new firms.                |

## 4. Which features of monopolistic competition are monopolistic in nature?

- Ans:-
- i) Product differentiation
  - ii) Control over price
  - iii) Downward sloping demand curve

## 5. What are the reasons which give emergence to the monopoly market?

Ans:-i) **Patent Rights:** Patent rights are the authority given by the government to a particular firm to produce a particular product for a specific time period.

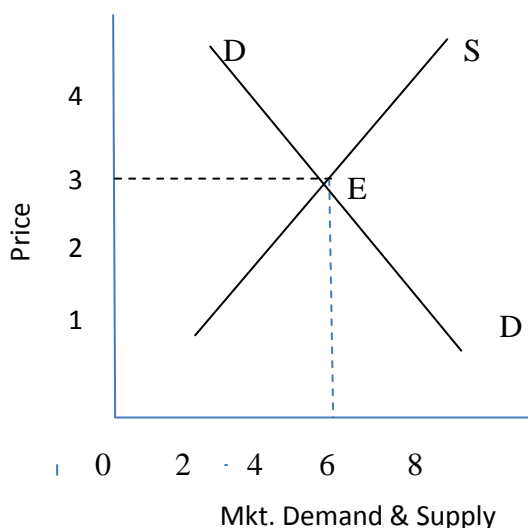
ii) **Formation of Cartel:** Cartel refers to a collective decision taken by a group of firms to avoid outside competition and securing monopoly right.

iii) **Government licensing:** Government provides the license to a particular firm to produce a particular commodity exclusively.

**6. Explain the process of price determination under perfect competition with the help of schedule and a diagram.**

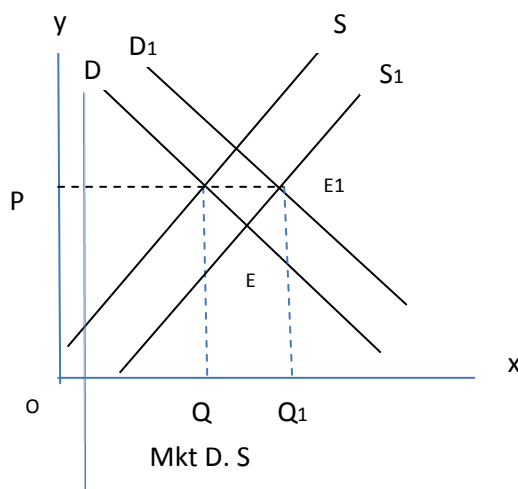
Ans:-Equilibrium price is that price which is determined by market forces of demand and supply. At this price both demand and supply are equal to each other. Diagrammatically it is determined at the point where demand curve and supply curve intersect each other. At this point price is known as equilibrium price and quantity is known as equilibrium quantity.

| Price (Rs.) | M.D (Units) | M.S (Units) |
|-------------|-------------|-------------|
| 1           | 10          | 2           |
| 2           | 8           | 4           |
| <u>3</u>    | <u>6</u>    | <u>6</u>    |
| 4           | 4           | 8           |
| 5           | 2           | 10          |



**7. When will equilibrium price not change even if demand and supply increase?**

Ans:- When proportionate increase in demand is just equal to proportionate increase in supply. Equilibrium price will not change. It can be shown in the following diagrams.

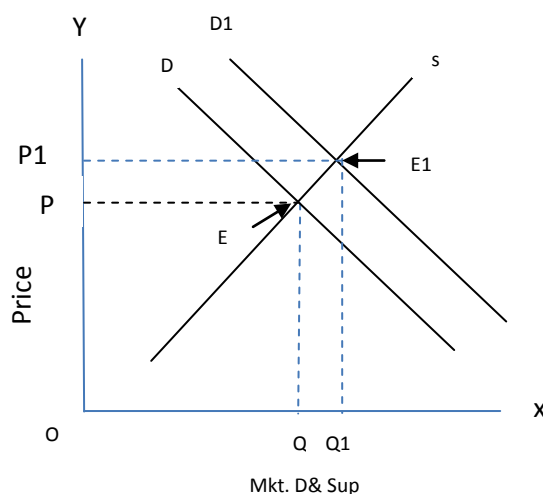




In the above diagram increase in demand is just equal to increase in supply. Demand curve shift from  $D$  to  $D_1$  and supply curve shift from  $S$  to  $S_1$  which intersect at point  $E$ . Thus equilibrium price remain unchanged at  $OP$  though equilibrium quantity increased from  $OQ$  to  $OQ_1$ .

**8. How does increase in price of substitute goods in consumption affect the equilibrium price of a good? Explain with a diagram.**

Ans:- An increase in price of substitute goods (coke) will cause increase in demand for its related goods (Pepsi) . The demand curve for Pepsi will shift to the right side. The supply curve of Pepsi remains the same. It will lead to an increase in equilibrium price of Pepsi and increase in quantity also.



Result: Price increases from  $OP$  to  $OP_1$ . Quantity demand increases from  $OQ$  to  $OQ_1$

**9. How does the equilibrium price of a normal commodity change when income of its buyers falls? Explain the chain effects.**

Ans:-

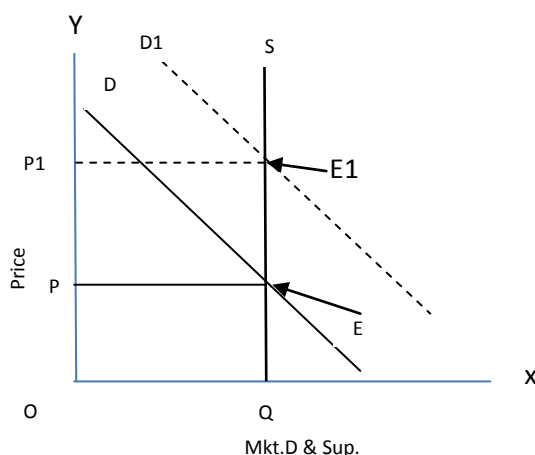
- When income falls demand falls
- Supply remaining unchanged .There is excess supply at a given price
- This leads to competition among sellers to reduce the price.
- As a result demand starts rising and supply starts falling.
- These changes continue till a new equilibrium price is established where demand equal supply.
- Equilibrium price falls.

**10. Why is the demand curve facing monopolistically competitive firm likely to be very elastic?**

Ans:- It is because the product produced by monopolistically competitive firms are close substitute to each other. If the products are closer substitutes to each other the elasticity of demand is high which makes the firm demand curve is elastic.

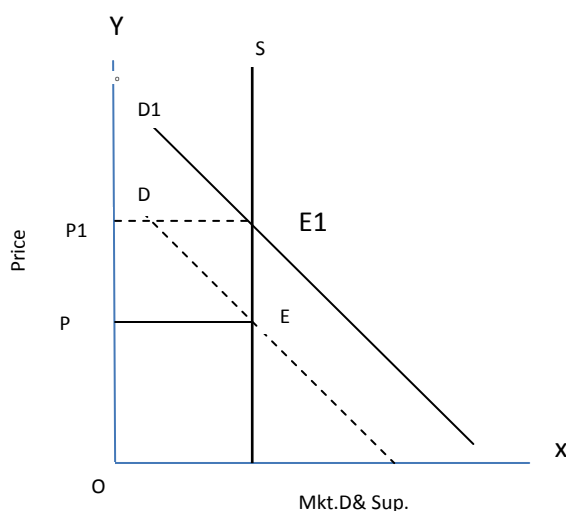
**11. Show with the help of diagram the effect on equilibrium price and quantity when supply is perfectly inelastic and demand increases and decreases?**

Ans:-



When supply is perfectly inelastic and demand increases. Demand curve shift to towards right. The new demand curve  $D_1$  intersects the supply curve at point  $E_1$ .

Result : Price increases from  $OP$  to  $OP_1$  and quantity demand remains unchanged.



In the above diagram demand curve shift left wards from  $D$  to  $D_1$  Price falls from  $OP$  to  $OP_1$  , but quantity remains same.

**12. Explain the implication of free entry and free exit of a firm in perfect competitive market.**

Ans: - If there is free entry and free exit of firms, then no firm can earn abnormal profit in the long run (firm earn zero abnormal profit). Each firm earns just normal profit.

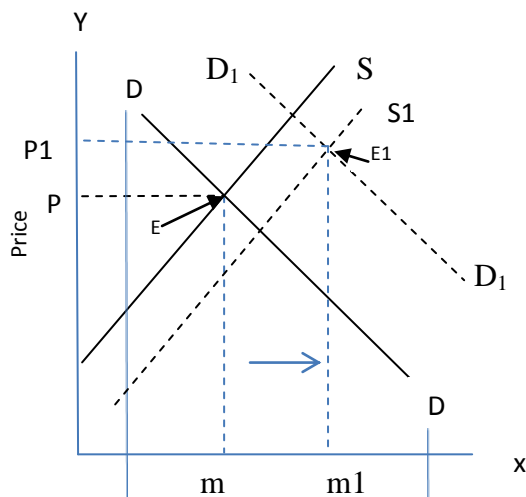
**13. Explain the implication of the feature 'large number of buyers and sellers' in perfect competition**

### LONG ANSWER QUESTIONS (6 MARKS)

**1. Equilibrium price may or may not change with shifts in both demand and supply curve. Comment.**

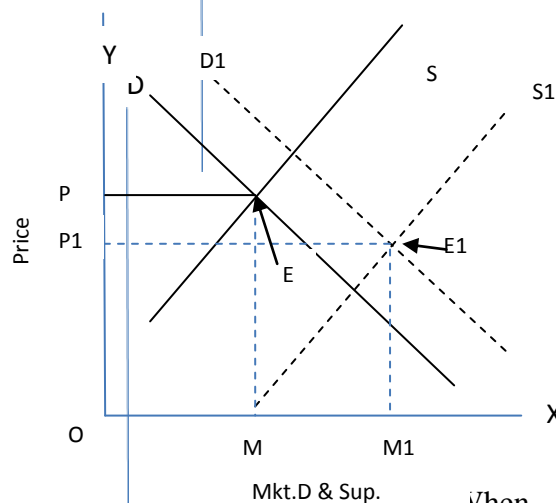
Ans:- There can be 3 situations of a simultaneous right wards shift of supply curves and demand curves.

- i) When demand increases more than supply price and quantity both will increase.



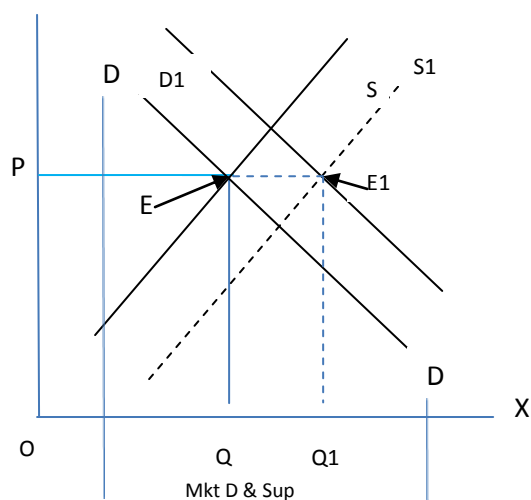
When increase in demand is more than increase in supply price increases from OP to OP1. Quantity increases from OM to OM1. Increase in price is less than increase in quantity.

- ii) When demand increases less than supply, price will fall but quantity will rise.



When supply increases more than demand price falls from OP to OP1 and quantity demand increases from OM to OM1.

Decrease in price is less than increase in quantity. i) When demand and supply increases equally then equilibrium price remain same.



When increase in demand is equal to increase in supply price remains unchanged at OP. Quantity exchanged increases from OQ to OQ<sub>1</sub>.

## 2. Distinguish between collusive and non-collusive oligopoly. Explain the following features of oligopoly.

a) Few firms.

b) Non-price competition.

Ans:- Collusive oligopoly is one in which the firm cooperate with each other in deciding price and output.

**Non collusive oligopoly** is one in which firms compete with each other.

**Few firms**: There are few sellers of the commodity and each seller sells a substantial portion of the output of the industry. The number of firm is so small that each seller knows that he can influence the price by his own action and that he can provoke rival firms to react.

**Non price competition**: The firms are afraid of competition through lowering the price because it may start price war. Therefore they compete through the non price factors like advertising, after sales service etc.

## 3. With the help of demand and supply schedule explain the meaning of excess demand and its effects on price of a commodity.

Ans:-

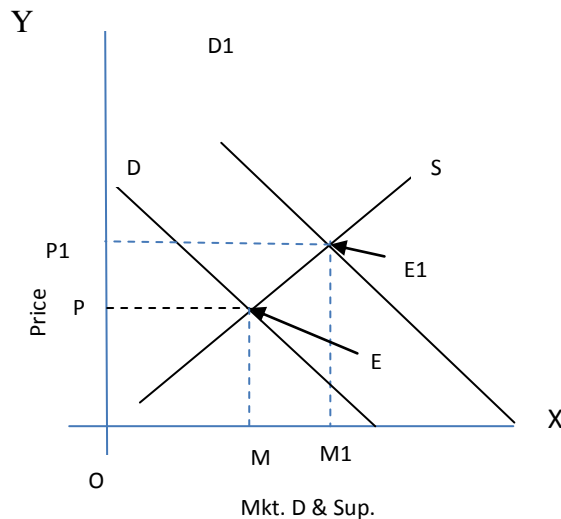
Demand and supply schedule

| Price(Rs.) | Market demand (in kg.) | Market supply(in kg.) |
|------------|------------------------|-----------------------|
| 10         | 10                     | 50                    |
| 9          | 20                     | 40                    |
| 8          | 30                     | 30                    |
| 7          | 40                     | 20                    |
| 6          | 50                     | 10                    |

The above schedule shows market demand and market supply of the commodity at different prices. At the price of 7 and 6 the market demand is greater than market supply. This is the situation of excess demand. There will be competition among the buyers resulting in a rise in price. Rise in price will result in fall in market demand and rise in market supply. This reduces the excess demand. These changes continue till the price rises to Rs. 8 at which excess demand is zero. The excess demand results in a rise in price of the commodity.

**4. Market for a good is in equilibrium. There is increase in demand for the goods. Explain the chain effect of this change.**

Ans:-



- Increase in demand shift the demand curve from  $D$  to  $D_1$  to right leading to excess demand  $E E_1$  at the given price  $OP$ .
- There will be competition among buyers leading to rise in price.
- As price rise supply starts rising (along  $S$ ) demand starts falling.
- These changes continues till  $D=S$  at a new equilibrium at  $E_1$
- The quantity rises to  $OM$  to  $OM_1$  and price rises  $OP$  to  $OP_1$

**5. Distinguish between monopoly and monopolistic competition.**

Ans:- i) Under monopoly there is single seller / producer of the commodity. Whereas under monopolistic competition there are large numbers of sellers, so the firm under monopoly has greater influence over price than under monopolistic competition.

ii) There is freedom of entry of new firms under monopolistic competition where as there is no such freedom under monopoly. As a result a monopolist can earn abnormal profit in the long run.

iii) Under monopolistic competition the product is heterogeneous while under monopoly there is no close substitute of the product.

iv) Demand curve in a monopoly market is less elastic than the demand curve under monopolistic competition because under monopoly there is no close substitute of the product.

## **HOTS**

### **1. How much loss a firm can bear in the short run?**

Ans:- A firm can bear losses up to its total fixed cost in the short run.

### **2. The firms are earning abnormal profits. Will the number of firms in the industry change?**

Ans:- If firms are getting abnormal profit new firms will enter the industry.

### **3. If firms are making abnormal losses will the number of firms in the industry change?**

Ans:- When firms are suffering losses, the number of firms in the industry will decrease as some firms may exit from the industry.

### **4. Why is demand curve facing a monopolistic competition firm likely to be more elastic?**

Ans:- In monopolistic competition market the demand curve of a firm is likely to be more elastic, the reason behind this is that all the firm in the industry produce close substitute of each other. If close substitute of any good is available in the market then elasticity of demand is very high because whenever there is a hike in price the consumer will shift to its substitutes. That is why a firm's demand curve under monopolistic competition is more elastic.

### **5. Explain how the efficiency may increase if two firms merge.**

Ans:- i) When two firms merge then there combined efforts and efficiency brings more output to the firm. Increase in the sale of output and economies of scale can be availed. It leads to division of labour and can get advantage of the specialization. Use of better and advanced technology saves the cost of production.

## **FREQUENTLY ASKED QUESTIONS – CBSE BOARD EXAMINATION**

### ***One Mark Questions (1M)***

- 1) In which market form can a firm not influence the price of the product?
- 2) What is equilibrium price?
- 3) Under which market form a firm is a price taker?
- 4) Define market equilibrium.
- 5) Define Monopoly.
- 6) State one feature of Oligopoly.

### ***Three Marks Questions (3M)***

- 1) Why is the number of firms small in an Oligopoly Market? Explain.
- 2) Explain three features of Monopoly.
- 3) How is equilibrium price of a commodity affected by a decrease in demand?
- 4) Why is the demand curve more elastic under monopolistic competition than under monopoly? Explain.
- 5) Explain the feature 'differentiated product' of a market with monopolistic competition.
- 6) Explain the effect of 'large number of buyers and sellers' in a perfectly competitive firm.

### ***Four Marks Questions (4 M)***

- 1) Distinguish between Monopoly and Perfect Competition.
- 2) Draw the Average Revenue Curve of a firm under a) Monopoly and b) Perfect Competition. Explain the difference in these curves, if any.
- 3) Show with the help of a diagram the effects of an increase in demand for a commodity on its equilibrium price and quantity.
- 4) Explain with the help of a diagram the determination of price of a commodity under perfect competition.
- 5) Explain the concept of equilibrium price with the help of market demand and supply schedules.

### ***Six Marks Questions (6 M)***

1. Given the market equilibrium of a good. What are the effects of Simultaneous increase in both demand and supply of that good on its equilibrium price and quantity?
2. Distinguish between perfect competition and monopoly. Why is the demand curve facing a firm under perfect competition perfectly elastic?
3. Explain briefly the three features of perfect competition.
4. Explain the chain of effects on demand, supply and price of a commodity caused by a leftward shift of the demand curve. Use diagram.
5. Explain three features of Monopolistic Competition.

## **PART B-INTRODUCTORY MACRO ECONOMICS**

### **Unit VI: NATIONAL INCOME AND RELATED AGGREGATES:**

#### **KEY CONCEPTS**

- Macro Economics: Its meaning
- Consumption goods, capital goods, final goods, intermediate goods, stock and flow, gross investment and depreciation.
- Circular flow of income
- Methods of calculation of national income
- Value added method (product method)
- Expenditure method
- Income method
- Concepts and aggregates related to national income
- Gross national product
- Net National product
- Gross and Net domestic product at market price and at factor cost.
- National disposable income (Gross and net)
- Private income
- Personal income
- Personal disposable income
- Real and Nominal GDP
- GDP and welfare

**Macro Economics**: - Macroeconomics is the study of aggregate economic variables of an economy.

**Consumption goods**:- Are those which are bought by consumers as final or ultimate goods to satisfy their wants.

Eg: Durable goods car, television, radio etc.

Non-durable goods and services like fruit, oil, milk, vegetable etc.

Semi durable goods such as crockery etc.

**Capital goods** – capital goods are those final goods, which are used and help in the process of production of other goods and services. E.g.: plant, machinery etc.

**Final goods**: Are those goods, which are used either for final consumption or for investment. It includes final consumer goods and final production goods. They are not meant for resale. So, no value is added to these goods. Their value is included in the national income.

**Intermediate goods** intermediate goods are those goods, which are used either for resale or for further production. Example for intermediate good is- milk used by a tea shop for selling tea.

**Stock**: - Quantity of an economic variable which is measured at a particular point of time.

Stock has no time dimension. Stock is static concept.

Eg: wealth, water in a tank.

**Flow**: Flow is that quantity of an economic variable, which is measured during the period of time.

Flow has time dimension- like per hr, per day etc.

Flow is a dynamic concept.

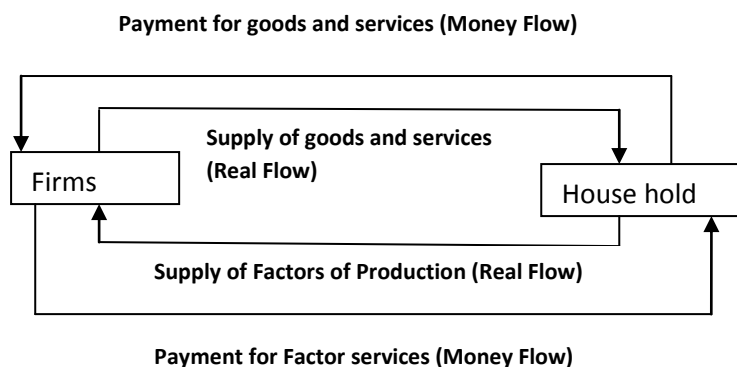
Eg: Investment, water in a stream.

**Investment**: Investment is the net addition made to the existing stock of capital.

**Net Investment** = Gross investment – depreciation.

**Depreciation**: - depreciation refers to fall in the value of fixed assets due to normal wear and tear, passage of time and expected obsolescence.

### **Circular flow in a two sector economy.**



Producers (firms) and households are the constituents in a two sectors economy.



Households give factors of production to firm and firms in turn supply goods and services to households.

### **Related aggregates**

#### **Gross Domestic product at market price**

It is the money value of all final goods and services produced during an accounting year with in the domestic territory of a country.

#### **Gross National product at market price:**

It is a money value of all final goods and services produced by a country during an accounting year including net factor income from abroad.

#### **Net factor income from abroad:**

Difference between the factor incomes earned by our residents from abroad and factor income earned by non-residents with in our country.

#### **Components of Net factor income from abroad**

- Net compensation of employees
- Net income from property and entrepreneurship (other than retained earnings of resident companies of abroad)
- Net retained earnings of resident companies abroad

#### **Formulas**

- $NNP_{Mp} = GNP_{mp} - \text{depreciation}$
- $NDP_{Mp} = GDP_{mp} - \text{depreciation}$
- $NDP_{Fc} = NDP_{mp} - \text{Net indirect taxes (indirect tax - subsidies)}$
- $GDP_{Fc} = NDP_{fc} + \text{depreciation}$
- $NNP_{Fc} = GDP_{mp} - \text{depreciation} + \text{Net factor income from abroad} - \text{Net indirect taxes}$
- ( $NNP_{FC}$  is the sum total of factor income earned by normal residents of a country during the accounting year)
- $NNP_{fc} = NDP_{fc} + \text{Net factor income from abroad.}$

#### **Concept of domestic (economic) territory**

Domestic territory is a geographical territory administered by a government within which persons, goods and capital circulate freely. (Areas of operation generating domestic income, freedom of circulation of persons, goods and capital)

#### **Scope identified as**

\*Political frontiers including territorial waters and air space.

\*Embassies, consulates, military bases etc. located abroad but including those locates within the political frontiers.

\*Ships, aircrafts etc., operated by the residents between two or more countries.

\*Fishing vessels, oil and natural gas rigs etc. operated by the residents in the international waters or other areas over which the country enjoys the exclusive rights or jurisdiction.

#### **Resident (normal resident):-**

Normal resident is a person or an institution who ordinarily resides in that country and whose center of economic interest lies in that country.

(The Centre of economic interest implies :- (1) the resident lives or is located within the economic territory. (2) The resident carries out the basic economic activities of earnings, spending and accumulation from that location 3. His center of interest lies in that country.

### **Relation between national product and Domestic product.**

Domestic product concept is based on the production units located within domestic (economic) territory, operated both by residents and non-residents.

National product concept based on resident and includes their contribution to production both within and outside the economic territory.

National product = Domestic product + Residents contribution to production outside the economic territory (Factor income from abroad) - Non- resident contribution to production inside the economic territory (Factor income to abroad)

### **Methods of calculation of national income**

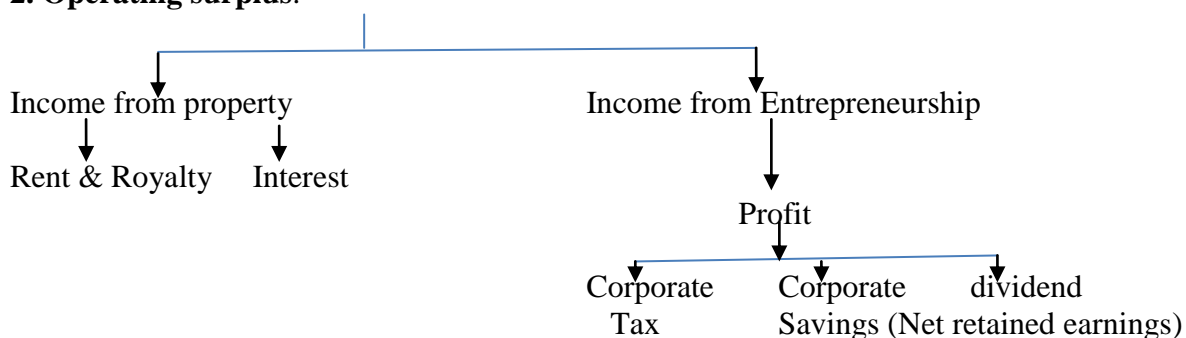
#### **I - PRODUCT METHOD (Value added method):**

- Sales + change in stock = value of output
- Change in stock = closing stock – opening stock
- Value of output - Intermediate consumption = Gross value added ( $GDP_{Mp}$ )
- $NNP_{Fc} (N.I) = GDP_{Mp} (-)$  consumption of fixed capital (depreciation)  
(+) Net factor income from abroad  
(-) Net indirect tax.

#### **Income method:**

##### **1. Compensation of employees.**

##### **2. Operating surplus.**

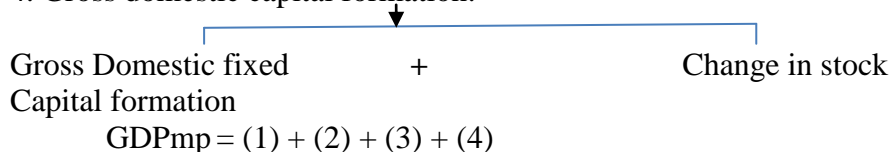


##### **3. Mixed income of self-employed.**

- $NDP_{fc} = (1) + (2) + (3)$
- $NNP_{fc} = NDP_{fc} (+)$  Net factor income from abroad
- $GNP_{mp} = NDP_{fc} +$  consumption of fixed capital + Net indirect tax  
(Indirect tax – subsidy)

#### **Expenditure method:**

1. Government final consumption expenditure.
2. Private final consumption expenditure.
3. Net Export.
4. Gross domestic capital formation.



$NNP_{fc} = GDP_{mp} - \text{consumption of fixed capital} + NFIA - \text{Net indirect taxes}$   
 Note: If capital formation is given as Net domestic capital formation we arrive at  $NDP_{mp}$ .  
 Capital formation = Investment

### **CALCULATION OF NATIONAL DISPOSABLE INCOME, PRIVATE INCOME, PERSONAL INCOME AND PERSONAL DISPOSABLE INCOME**

| <b>National income</b>   | <b>Disposable income</b> | <b>Private Income includes factor income as well as Transfer income (Earned income + Unearned income)</b>   | <b>Personal Income</b>  |
|--|--------------------------|---|---|
| <i>It is the income from all the sources (Earned Income as well as transfer payment from abroad) available to resident of a country for consumption expenditure or saving during a year.</i><br>$NNP_{FC} + \text{Net Indirect tax} + \text{Net current transfer from abroad} = \text{Net National Disposable Income}$<br><i>(Gross National Income includes depreciation)</i> |                          | <i>Factor income from net domestic product accruing to private sector includes income from enterprises owned and controlled by the private individual.</i><br><i>Excludes:-</i><br>1. <i>Property and entrepreneurial income of the Gov. departmental enterprise</i><br>2. <i>Savings of the Non-departmental Enterprise.</i><br><i>Factor Income from NDP Accruing to private sector = <math>NDP_{FC}</math> (-) income from properly entrepreneurship accruing to the govt departmental Enterprises (-) savings of Non departmental enterprises.</i><br><b><u>Private Income Includes</u></b><br>* Factor income from net domestic product accruing to private sector.<br>+ Net factor income from abroad<br>+ Interest on National Debt<br>+ Current transfer from Govt.<br>+ Current transfer from rest of the world. | <i>PI is the income Actually received by the individuals and households from all sources in the form of factor income and current transfers.</i><br>$\text{Personal income} = \text{Private Income} (-) \text{corporation tax.} (-) \text{Corporate Savings OR Undistributed profits}$<br><b><u>Personal disposable income</u></b><br>$\text{Personal income} (-) \text{Direct Personal tax} (-) \text{Miscellaneous Receipts of the govt. Administrative department (fees and fines paid by house hold.)}$ |

### **One Mark questions.**

**1. When will the domestic income be greater than the national income?**

Ans: When the net factor income from abroad is negative.

**2. What is national disposable income?**

Ans. It is the income, which is available to the whole economy for spending or disposal

$$NNP_{Mp} + \text{net current transfers from abroad} = NDI$$

**3. What must be added to domestic factor income to obtain national income?**

Ans. Net factor income from abroad.

**4. Explain the meaning of non-market activities**

Ans. Non marketing activities refer to acquiring of many final goods and services not through regular market transactions. E.g. vegetable grown in the backyard of the house.

**5. Define nominal GNP**

Ans. GNP measured in terms of current market prices is called nominal GNP.

**6. Define Real GNP.**

Ans. GNP computed at constant prices (base year price) is called real GNP.

**7. Meaning of real flow.**

Ans. It refers to the flow of goods and services between different sectors of the economy. Eg. Flow of factor services from household to firm and flow of goods and services from firm to household.

**8. Define money flow.**

It refers to the flow of money between different sectors of the economy such as firm, household etc. Eg. Flow of factor income from firm to house hold and consumption expenditure from house hold to firm.

**3- 4 Mark Questions****1. Distinguish between  $GDP_{Mp}$  and  $GNP_{Fc}$** 

Ans. The difference between both arise due to (1) Net factor income from abroad. and 2) Net indirect taxes. In  $GDP_{Mp}$  Net factor income from abroad is not included but it includes net indirect taxes.

$$GNP_{Fc} = GDP_{Mp} + \text{net factor income from abroad} - \text{net indirect taxes}$$

**2. Distinguish between personal income and private income**

Ans. Personal income: -It is the sum total of earned income and transfer incomes received by persons from all sources within and outside the country.

Personal income = private income – corporate tax –corporate savings (undistributed profit)  
Private income consists of factor income and transfer income received from all sources by private sectors within and outside the country.

**3. Distinguish between nominal GNP and real GNP**

Ans. Nominal GNP is measured at current prices. Since this aggregate measures the value of goods and services at current year prices, GNP will change when volume of product changes or price changes or when both changes.

Real GNP is computed at the constant prices. Under real GNP, value is expressed in terms of prices prevailing in the base year. This measure takes only quantity changes. Real GNP is the indicator of real income level in the economy.

**4. Explain the main steps involved in measuring national income through product method**

Ans.

- Classify the producing units into industrial sectors like primary, secondary and tertiary sectors.
- Estimate the net value added at the factor cost.
- Estimate value of output by sales + change in stock
- Estimate gross value added by value of output – intermediate consumption
- Deduct depreciation and net indirect tax from gross value added at market price to arrive at net value added at factor cost =  $NDP_{Fc}$
- Add net factor income received from abroad to  $NDP_{Fc}$  to obtain  $NNP_{Fc}$  which is national income

**5. Explain the steps involved in calculation of national income through income method**

- a) Classify the producing enterprises into industrial sectors like primary, secondary and tertiary.
- b) Estimate the following factor income paid out by the producing units in each sector i.e.
  - \*Compensation of employees
  - \*Operating surplus
  - \*Mixed income of self employed
- c) Take the sum of the factor income by all the industrial sectors to arrive at the  $NDP_{Fc}$  (Which is called domestic income)
- d) Add net factor income from abroad to the net domestic product at factor cost to arrive at the net national product at factor cost.

**6. Explain the main steps involved in measuring national income through expenditure method.**

- a) Classify the economic units incurring final expenditure into distant groups like households, government, firms etc.
- b) Estimate the following expenditure on final products by all economic units
  - Private final consumption expenditure
  - Government final consumption expenditure
  - Gross domestic capital formation
  - Net export(Sum total of above gives  $GDP_{Mp}$ )
- c) Deduct depreciation, net indirect taxes to get  $NDP_{Fc}$
- d) Add net factor income from abroad to  $NDP_{Fc}$  to arrive at  $NNP_{Fc}$ .

**7. What are the precautions to be taken while calculating national income through product method (value added method)**

- a) Avoid double counting of production, take only value added by each production unit.
- b) The output produced for self-consumption to be included
- c) The sale & purchase of second hand goods should not be included.
- d) Value of intermediate consumption should not be included
- e) The value of services rendered in sales must be included.

**8. Precautions to be taken while calculating national income through income method.**

- a) Income from owner occupied house to be included.
- b) Wages & salaries in cash and kind both to be included.
- c) Transfer income should not be included
- d) Interest on loans taken for production only to be included. Interest on loan taken for consumption expenditure is non-factor income and so not included.

**9. Precautions to be taken while calculations N.I under expenditure method.**

- a) Avoid double counting of expenditure by not including expenditure on intermediate product
- b) Transfer expenditure not to be included
- c) Expenditure on purchase of second hand goods not to be included.

**10. Write down the limitations of using GDP as an index of welfare of a country**

- 1) The national income figures give no indications of the population, skill and resources of the country. A country may be having high national income but it may be consumed by the increasing population, so that the level of people's wellbeing or welfare standard of living remains low.
- 2) High N. I may be due to greater area of the country or due to the concentration of some resources in out particular country.

- 3) National income does not consider the level of prices of the country. People may be having income but may not be able to enjoy high standard of living due to high prices.
- 4) High N. I may be due to the large contribution made by a few industrialists
- 5) Level of unemployment is not taken into account.
- 6) National income does not care to reduce ecological degradation. Due to excess of economic activity which leads to ecological degradation reduces the welfare of the people. Hence GNP and economic welfare are not positively related. Income in GNP does not bring about increase in economic welfare.

**11. 'Machine purchased is always a final good' do you agree? Give reason for your answer**

Whether machine is a final good or it depends on how it is being used (end use). If machine is bought by a household, then it is a final good. If machine is bought by a firm for its own use, then also it is a final good. If the machine is bought by a firm for resale then it is an intermediate good.

**12. What is double counting? How can it be avoided?**

Counting the value of commodities at every stage of production more than one time is called double counting.

It can be avoided by

- a) taking value added method in the calculation of the national income.
- b) By taking the value of final commodity only while calculating N.I

**6 Mark questions**

**1. State whether following is true or false. Give reason for your answer.**

- a) Capital formation is a flow

True, because it is measured over a period of time.

- b) Bread is always a consumer good.

False, it depends upon the end use of bread. When it is purchased by a household it is a consumer good. When purchased by restaurant for making sandwich, it is an intermediate (producer) good.

- c) Nominal GDP can never be less than real GDP

False. Nominal GDP can be less than the real GDP when the prices in the base year is more than the current year.

- d) Gross domestic capital formation is always greater than gross fixed capital formation.

False, gross domestic capital formation can be less than gross fixed capital formation if change in stock is negative.

**2. Why are exports included in the estimation of domestic product by the expenditure method? Can the gross domestic product be greater than the gross national product? Explain**

Expenditure method estimates expenditure on domestic product i.e., expenditure on final goods and services produced within the economic territory of the country. It includes expenditure by residents and non-residents both. Exports though purchased by non residents are produced within the economic territory and therefore a part of domestic product. Domestic product can be greater than national product, if the factor income paid to the rest of the world is greater than the factor income received from the rest of the world i.e, when net factor income received from abroad is negative.

### 3. How will you treat the following while estimating domestic product of India?

a) Rent received by resident Indian from his property in Singapore.

No, it will not be included in domestic product as this income is earned outside the economic territory of India.

b) Salaries of Indians working in Japanese Embassy in India

It will not be included in domestic product of India as embassy of Japan is not a part of economic territory of India.

c) Profits earned by branch of American bank in India.

Yes, it is included as part of domestic product since the branch of American bank is located within the economic territory of India.

d) Salaries paid to Koreans working in the Indian embassy in Korea

Yes, it will be part of domestic product of India because the income is earned within the economic territory of India. Indian embassy in Korea is a part of economic territory of India.

### 4 How are the following treated in estimating national income from expenditure method? Give reason.

a) Purchase of new car by a household: purchase of car is included in the national income because it is final consumption expenditure, which is part of national income.

b) Purchase of raw material by purchase unit: purchase of raw material by purchase unit is not included in the national income because raw material is intermediate goods and intermediate goods and service are excluded from the national income. Purchase of raw material, if included in national income will result in double counting.

c) Expenditure by the government on scholarship to student is not included in the national income because it is a transfer payment and no productive service is rendered by the student in exchange.

### 5 Are the following item included in the estimating a country's national income? Give reason.

1) Free cloth given to workers: free cloth given to worker is a part of wages in kind i.e. compensation to employee such compensation to employee is paid for the productive services in the economy, it is included in the national income.

2) Commission paid to dealer in old car: commission paid to dealer in old car is included in the estimation of national income because it is the income of the dealer for his productive services to various parties.

3) Growing vegetable in a kitchen garden of the house: growing vegetable in a kitchen garden of the house amount to production, though not for sale for self-consumption. It is included in the national income because it adds to the production of goods.

## NATIONAL INCOME – NUMERICALS

### 1. Calculate Value Added at factor cost from the following.

|    | ITEMS                     | Rs. CRORES |
|----|---------------------------|------------|
| a. | Purchase of raw materials | 30         |
| b. | Depreciation              | 12         |
| c. | Sales                     | 200        |
| d. | Excise tax                | 20         |
| e. | Opening stock             | 15         |
| f. | Intermediate consumption  | 48         |
| g. | Closing stock             | 10         |

Ans: Sales +  $\Delta$  in stock = value of output  
 $200 + (\text{cl. St} - \text{op. st})$   
 $200 + (10 - 15)$   
 $= 200 - 5 = 195$   
Value of output – intermediate consumption  
= value added at MP  
 $195 - 48 = 147$   
V.A at FC = V.A at MP – Net indirect tax  
 $147 - 20$   
127 crores

## 2. Calculate (a) Net National Product at MP, and (b) Gross National Disposable Income

| ITEMS                                    | Rs. crores |
|--|------------|
| a. Private final Consumption expenditure | 200        |
| b. Net indirect taxes                    | 20         |
| c. Change in stocks                      | (-- )15    |
| d. Net current transfers from abroad     | (-- )10    |
| e. Govt. final consumption expenditure   | 50         |
| f. Consumption of fixed capital          | 15         |
| g. Net domestic capital formation        | 30         |
| h. Net factor income from abroad         | 5          |
| i. Net imports                           | 10         |

Ans: (a) + (e) + (g) + (-i) =  $\text{NDP}_{\text{MP}}$   
 $200 + 50 + 30 - 10$   
 $280 - 10 = 270$  crores  
 $\text{NNP}_{\text{MP}} = \text{NDP}_{\text{MP}} + \text{NFIFA}$   
 $270 + 5 = 275$   
 $\text{NNP}_{\text{MP}} = 275$  crores

$\text{GNDI} = \text{NNP}_{\text{PC}} + \text{NFIFA} + \text{Net indirect taxes} + \text{Net current transfers from abroad} +$   
Depreciation (comp of fixed capital)  
 $\text{NNP}_{\text{MP}} - \text{net in tax} = 275 - 20 = 255$  crores  
 $\text{GNDI} = 255 + 20 + 5 + (-10) + 15$   
 $= 295 - 10 = 285$  crores  
 $\text{GNDI} = 285$  crores

## 3. Calculate Gross Domestic Product at Market Price by

### (a) Production Method and (b) Income Method

| ITEMS                          | Rs. crores |
|--------------------------------|------------|
| a. Intermediate consumption by |            |
| i) Primary sector              | 500        |
| ii) Secondary sector           | 400        |
| iii) Tertiary sector           | 400        |
| b. Value of output by          |            |
| i) Primary sector              | 1000       |
| ii) Secondary sector           | 900        |
| iii) Tertiary sector           | 700        |
| c. Rent                        | 10         |
| d. Compensation of employees   | 400        |
| e. Mixed income                | 550        |



|    |                               |         |
|----|-------------------------------|---------|
| f. | Operating surplus             | 300     |
| h. | Net factor income from abroad | (-- )20 |
| i. | Interest                      | 5       |
| j. | Consumption of fixed capital  | 40      |
| k. | Net indirect taxes            | 10      |

Ans: GDP<sub>MP</sub> by production method

(b) (i) + (ii) + (iii) – a (i) + (ii) + ( iii) = value added

(1000+ 900 + 700) – (500 -400-400)

2600 – 1300 = 1300 crores Value added at MP (GDP<sub>MP</sub>)

#### Income method

Compensation of employees + operating surplus + mixed income = NDP<sub>FC</sub>

= 400 + 300 + 550 = 1250 crores

GDP<sub>MP</sub> = NDP<sub>FC</sub> + conspn of fixed capital + net In. tax

= 1250+ 40 + 10

GDP<sub>MP</sub> =1300

#### **4. Calculate Net National Disposable Income from the following data.**

|    | ITEMS                             | Rs. crores |
|----|-----------------------------------|------------|
| a. | Gross domestic product at MP      | 1000       |
| b. | Net factor income from abroad     | (-) 20     |
| c. | Net indirect taxes                | 120        |
| d. | Consumption of fixed capital      | 100        |
| e. | Net current transfers from abroad | 50         |

Ans: NNDI = GDP<sub>MP</sub> – consumption of fixed capital + Net FIFA + Net current transfer from abroad

= 1000- 100 + 50 + (-20)

= 880 + 50 = 930 crores

#### **5. Calculate Gross National Disposable Income from the following.**

|    | ITEMS  | Rs. crores |
|----|--|------------|
| a) | National Income                              | 2000       |
| b) | Net current transfers from rest of the world | 200        |
| c) | Consumption of fixed capital                 | 100        |
| d) | Net factor income from abroad                | (-) 50     |
| e) | Net indirect taxes                           | 25         |

Ans: GNDI= (a) + (b) +(c) + (e)

= 2000 + 200 + 100 + 250

GNDI = 2550 crores

#### **6. ESTIMATE NATIONAL INCOME BY**

**(a) EXPENDITURE METHOD (b) INCOME METHOD FROM THE FOLLOWING**

|    | DATA                                  | Rs. in crores |
|----|---------------------------------------|---------------|
| 1. | Private final consumption expenditure | 210           |
| 2. | Govt: final consumption expenditure   | 50            |
| 3. | Net domestic capital formation        | 40            |
| 4. | Net exports                           | (-) 5         |
| 5. | Wages & Salaries                      | 170           |
| 6. | Employer's contribution               | 10            |
| 7. | Profit                                | 45            |

|                                  |    |
|----------------------------------|----|
| 8. Interest                      | 20 |
| 9. Indirect taxes                | 30 |
| 10. Subsidies                    | 05 |
| 11. Rent                         | 10 |
| 12. Factor income from abroad    | 03 |
| 13. Consumption of fixed capital | 25 |
| 14. Royalty                      | 15 |

Ans: National Income (NNP FC)

Expenditure Method

$$(1) + (2) + (3) + (4) = \text{NDP}_{\text{MP}}$$

$$210 + 50 + 40 + (-5) = 295$$

$$\text{NNP FC} = \text{NDP MP} + \text{factor Income from abroad} - \text{net Indirect tax (Indirect tax - subsidy)}$$

$$295 + 3 - (30 - 5)$$

$$295 + 3 - 25$$

$$= 298 - 25 = 273$$

$$\text{NNP FC} = 273 \text{ crores}$$

Income method:

$$(5) + (6) + (7) + (8) + (11) + (15)$$

$$170 + 10 + 45 + 20 + 10 + 15$$

$$= 270 (\text{NDP}_{\text{FC}})$$

$$\text{NDP}_{\text{FC}} = \text{NDP}_{\text{FC}} + \text{FIFA}$$

$$= 270 + 3 = 273 \text{ crores}$$

**7. FROM THE FOLLOWING DATA CALCULATE**

**(a) NATIONAL INCOME (b) PERSONAL DISPOSABLE INCOME.**

|   |       |
|---|-------|
| 1. Profit   | 500   |
| 2. Rent   | 200   |
| 3. Private income                                     | 2000  |
| 4. Mixed income of self-employed                      | 800   |
| 5. Compensation of employers                          | 1000  |
| 6. Consumption of fixed capital                       | 100   |
| 7. Net factor income from abroad                      | -(50) |
| 8. Net retained earnings of private employees'        | 150   |
| 9. Interest   | 250   |
| 10. Net exports                                       | 200   |
| 11. Co-operation                                      | 100   |
| 12. Net indirect tax                                  | 160   |
| 13. Direct taxes paid by houses hold's                | 120   |
| 14. Employers contribution to social security scheme. | 60    |

$$\text{Ans: NNP FC (N. I)} = (5) + (9) + (4) + (1) + (2)$$

$$1000 + 250 + 800 + 500 + 200$$

$$\text{NDP FC} = 2750 \text{ crores}$$

$$\text{NNP FC} = \text{NDP FC} + (7)$$

$$= 2750 + (-50)$$

$$\text{NNP Fc} = 2700 \text{ crores}$$

$$\text{PDI} = (3) - (8) - (11) - (13)$$

$$2000 - 150 - 100 - 120$$

$$\text{PDI} = 2000 - 370 = 1630 \text{ crores}$$

**8. CALCULATE NATIONAL INCOME AND GROSS NATIONAL DISPOSABLE INCOME FROM THE FOLLOWING DATA.**

|  |        |
|--|--------|
| Net indirect tax                       | 05     |
| Net domestic fixed capital formation   | 100    |
| Net exports                            | (-) 20 |
| Gov.: final consumption expenditure    | 200    |
| Net current transfer from abroad       | 15     |
| Private final consumption expenditure  | 600    |
| Change in stock                        | 10     |
| Net factor from abroad                 | 05     |
| Gross domestic fixed capital formation | 125    |

Ans: National Income ( $NNP_{FC}$ )

$$= (4) + (6) + (2) + (7) + (3) = NDP_{MP}$$

$$= 200 + 600 + 100 + 10 + (-20)$$

$$= 910 - 20 = 890$$

$$NDP_{MP} = 890 \text{ crores}$$

$$NNP_{FC} = NDP_{MP} + (8) - (1)$$

$$= 890 + 5 - 5$$

$$NNP_{FC} = 890$$

$$\text{Depreciation} = (9) - (2)$$

$$125 - 100 = 25 \text{ crores}$$

$$GNDI = NNP_{FC} + \text{Net Indirect Tax} + \text{Net Current transfers from abroad} + \text{depreciation}$$

$$= 890 + 05 + 15 + 25$$

$$GNDI = 935 \text{ crores}$$

**9. CALCULATE NNP AT MARKET PRICE BY PRODUCTION METHOD AND INCOME METHOD**

|                                  | Crores |
|----------------------------------|--------|
| 1. Inter mediate consumption     |        |
| (a) primary sector               | 500    |
| (b) Secondary sector             | 400    |
| (c) tertiary sector              | 300    |
| 2. Value of output of            |        |
| (a) primary sector               | 1,000  |
| (b) Secondary sector             | 900    |
| (c) tertiary sector              | 700    |
| 3. Rent                          | 10     |
| 4. Emoluments of employers       | 400    |
| 5. Mixed income                  | 650    |
| 6. Operating surplus             | 300    |
| 7. Net factor income from abroad | -20    |
| 8. Interest                      | 05     |
| 9. Consumptive of fixed capital  | 40     |
| 10. Net indirect tax             | 10     |

Ans:  $NNP_{MP}$  by production method

$$(2) \text{ Value of output} - (1) \text{ Intermediate conspn} = \text{value added at MP}$$

$$(2) a + b + c - (1) a + b + c$$

$$1000 + 900 + 700 - 500 + 400 + 300$$

$$2600 - 1200$$

$$1400 = GDP_{MP}$$

$$\text{NNP}_{\text{MP}} = \text{GDP}_{\text{MP}} - (9) + (7) \\ = 1400 - 40 + (-20)$$

$$\text{NNP}_{\text{MP}} = 1340$$

Income Method:

$$\text{NNP}_{\text{MP}} = (4) + (5) + (6) + (10) + (7) \\ = 400 + 650 + 300 + 10 + (-20)$$

$$\text{NNP}_{\text{MP}} = 1350 + 10 - 20$$

# 10. CALCULATE GNP at FACTOR COST BY INCOME METHOD AND EXPENDITURE METHOD.

Rupees in crores

|  |       |
|--|-------|
| 1. Private final consumption expenditure | 1000  |
| 2. Net domestic capital formation        | 200   |
| 3. Profit                                | 400   |
| 4. Compensation of employers             | 800   |
| 5. Rent                                  | 250   |
| 6. Gov.: final consumption expenditure   | 500   |
| 7. Consumption of fixed capital          | 60    |
| 8. Interest                              | 150   |
| 9. Net current transfer from row         | (-)80 |
| 10. Net factor income from abroad        | (-)10 |
| 11. Net exports                          | (-)20 |
| 12. Net indirect taxes                   | 80    |

Ans: GNP FC by Income method

$$\text{GNP FC} = 4 + 3 + 5 + 8 + 10 + 7 \\ 800 + 400 + 250 + 150 + (-10) + 60$$

$$\text{GNP FC} = 1650 \text{ crores}$$

GNP FC by Expenditure Method

$$\text{GNP FC} = 1 + 2 + 6 + 10 + 11 - 12 + 7 \\ = 1000 + 200 + 500 + (-10) + (-20) - 80 + 60 \\ = 1700 - 110 + 60$$

$$\text{GNP FC} = 1650 \text{ crores}$$

# 11. CALCULATE PRIVATE INCOME AND PERSONAL DISPOSABLE INCOME FROM THE FOLLOWING DATA

Rupees in crores

|  |      |
|--|------|
| 1. National income   | 5050 |
| 2. Income from property and entrepreneurship to gov. administrative department | 500  |
| 3. Saving of non-department public enterprises                                 | 100  |
| 4. Corporation tax   | 80   |
| 5. Current transfer from govt: administrative depart                           | 200  |
| 6. Net factor income from abroad   | -50  |
| 7. Direct personal tax   | 150  |
| 8. Indirect taxes  | 220  |
| 9. Current transfer from Raw   | 80   |
| 10. Saving of private corporate sector   | 500  |

Ans: Private Income = 1 – 2- 3 + 5 + 9  
 $5050 - 500 - 100 + 200 + 80$   
 $5430 - 500$

Private Income = 4930 crores

PDI = Private Income – 4 -10 -7  
 $4930 - 80 - 500 - 150$

PDI = 4200 crores

## 12. Calculate private income

|  |     |
|--|-----|
| 1. Income from domestic product accruing to private sector | 250 |
| 2. Net current transfer from raw                           | 40  |
| 3. Net current transfer from govt: administrative dept     | 10  |
| 4. National debt interest                                  | 20  |
| 5. Net factor income from abroad                           | 05  |

Ans: Private Income = 1 + 2+ 3 + 4 + 5  
 $250 + 40 + 10 + 20 + 5$   
 $= 325$  crores

## 13. CALCULATE NET NATIONAL DISPOSABLE INCOME AND PERSONAL INCOME FROM THE FOLLOWING DATA

|   | Rs. In crores |
|---|---------------|
| 1. Net indirect taxes   | 90            |
| 2. Compensation of employers  | 400           |
| 3. Personal taxes   | 100           |
| 4. Operating surplus  | 200           |
| 5. Corporation profit tax   | 80            |
| 6. Mixed income of self-employed  | 500           |
| 7. National debt interest   | 70            |
| 8. Saving of non-departmental enterprises                                       | 40            |
| 9. Current transfer from govt   | 60            |
| 10. Income from property and entrepreneurship to govt administrative Department | 30            |
| 11. Net current transfer from RAW   | 20            |
| 12. Net factor income from abroad   | -50           |
| 13. saving of private corporate sector  | 20            |

Ans: NDP<sub>fc</sub> = (2) + (4) + (6)  
 $400 + 200 + 500 = 1100$  crores

NNDI = NDP<sub>fc</sub> + (12) + (1) + (11)  
 $= 1100 + (-50) + 90 + 20$   
 $NNDI = 1210 - 50$   
 $= 1160$  crores

## Personal Income

Ans:

Private Income = NDP<sub>FC</sub> – (8) – (10)  
 $1160 - 40 - 30 = 1090$  crores

$1090 + 7 + 9 + 11 + 12$

$1090 + 70 + 60 + 20 + (-50) = 1190$  crores

Personal income = Private Income – Corporation Profit Tax – Savings of private corporate sectors

$1190 - 80 - 20 = 1090$  crores

**14. CALCULATE FROM THE FOLLOWING DATA (A) PRIVATE INCOME (B) PERSONAL INCOME (C) PERSONAL DISPOSABLE INCOME.**

**RS IN CRORES**

|   |     |
|---|-----|
| 1. Factor income from NDP accruing to private sector    | 300 |
| 2. Income from entrepreneurship and property            |     |
| 3. Accruing to govt administrative departmental         | 70  |
| 4. Savings of non-departmental enterprises              | 60  |
| 5. Factor income from abroad                            | 20  |
| 6. Consumption of fixed capital                         | 35  |
| 7. Current transfer from rest of the world              | 15  |
| 8. Corporation taxes                                    | 25  |
| 9. Factor income to abroad                              | 30  |
| 10. Current transfer from govt governmental admi depart | 40  |
| 11. Direct taxes paid by house hold                     | 20  |
| 12. National dept interest                              | 05  |
| 13. saving of private corporate sector                  | 80  |

Ans Private Income = 1 + 5 + 7 -9 + 10 + 12  
300 + 20 + 15 -30 + 40 + 05

Private Income = 350 crores

Personal Income = Private income – 8 – 13  
= 350 – 25 – 80

Personal Income = 245 crores

PDI = Personal Income - 11  
245 – 20

PDI = 225 crores

**15. From the following data, calculate:**

**(a) Gross national Disposable Income**

**(b) Private Income**

**(c) Personal Disposable Income**

**(Rs. In Crores)**

|   |     |
|---|-----|
| (1) Net national product at factor cost                     | 700 |
| (2) Indirect taxes  | 60  |
| (3) Subsidies   | 10  |
| (4) Consumption of fixed capital                            | 40  |
| (5) Income from property and entrepreneurship               |     |
| Accruing to government administrative departments           | 50  |
| (6) Current transfers from rest of the world                | 45  |
| (7) Profits   | 100 |
| (8) Direct tax paid by households                           | 50  |
| (9) Savings of private corporate sector                     | 60  |
| (10) Saving of non-departmental enterprises                 | 25  |
| (11) Current transfer from govt: administrative departments | 70  |
| (12) A factor income abroad                                 | 20  |
| (13) Factor income to abroad                                | 30  |
| (14) Corporation tax  | 35  |

Ans GNDI = 1 + 2 -3 + 6 + 4

700 + 60 – 10 + 45 + 40 = 805 -10 + 40 GNDI = 835 crores

b) Private Income = 1 – 5 -10 + 6 +11

700 – 50 -25 + 45 +70

Private Income = 740 crores

c) PDI = Private Income – 14 – 9 – 8

740 – 35 – 60 – 50

PDI = 594 crores

**16. Calculate Gross National Disposable Income from the following data:**

(Rs. In Crores)

|   |       |
|---|-------|
| (1) National income                             | 2000  |
| (2) Net current transfer from rest of the world | 200   |
| (3) Consumption of fixed capital                | 100   |
| (4) Net factor income from abroad               | (-)50 |
| (5) Net indirect taxes                          | 250   |

Ans: GNDI = 1 + 5 + 2 + 3

2000 + 250 + 200 + 100

GNDI = 2550 crores

**17. Calculate Net National Disposable Income from the Following Data:**

(Rs. In Crores)

|   |       |
|---|-------|
| (1) Gross national product at factor cost       | 800   |
| (2) Net current transfer from rest of the world | 50    |
| (3) Net indirect taxes                          | 70    |
| (4) Consumption of fixed capital                | 60    |
| (5) Net factor income from abroad               | (-)10 |

Ans: NNDI = 1 + 2 + 3 -4

800 + 50 + 70 -60

= 860 crores

**NUMERICALS TO BE CALCULATED BY STUDENTS**

**1. Calculate Net National Disposable Income From The Following Data:**

(Rs. In Crores)

|   |       |
|---|-------|
| (i) Gross domestic product at market price      | 1,000 |
| (ii) Net factor income from abroad              | (-)20 |
| (iii) Net indirect taxes                        | 120   |
| (iv) Consumption of fixed capital               | 100   |
| (v) Net current transfer from rest of the world | 70    |

**2. Calculate Gross National Disposable Income The Following Data:**

(Rs. In Crores)

|  |     |
|--|-----|
| (i) National income (or NNPfc)                   | 800 |
| (ii) Net indirect taxes                          | 100 |
| (iii) Net factor income from abroad              | 30  |
| (iv) Net current transfer from rest of the world | 50  |
| (v) Consumption of fixed capital                 | 70  |

**3. Calculate Gross National Disposable Income And net National Disposable Income from the Following Data:**

(Rs. In Crores)

|   |     |
|---|-----|
| (i) Consumption of fixed capital          | 30  |
| (ii) Net national product at market price | 240 |

|   |        |
|---|--------|
| (iii) Net Indirect taxes                          | 40     |
| (iv) Net current transfers from rest of the world | (-)20  |
| (v) Net factor income from abroad                 | (-) 10 |

**4.Find Out  $GNP_{MP}$ ,  $NDP_{FC}$  And Gross National Disposable Income.**

(Rs. In Crores)

|  |     |
|--|-----|
| (i) National income                            | 520 |
| (ii) Net factor income from abroad             | 10  |
| (iii) Indirect taxes                           | 40  |
| (iv) Subsidies                                 | 10  |
| (v) Consumption of fixed capital               | 50  |
| (vi) Net current transfer received from abroad | 20  |

**5.Calculate  $NNP_{FC}$ , net National Disposable Income and Gross National Disposable Income from following data:**

(Rs. In Crores)

|  |       |
|--|-------|
| (i) $GNP_{MP}$   | 1000  |
| (ii) Net Indirect taxes                                    | 100   |
| (iii) Net current transfer received from rest of the world | (-)20 |
| (iv) Subsidies   | 25    |
| (v) Consumption of fixed capital                           | 50    |
| (vi) Net factor income paid to the rest of the world       | (-)10 |

**6. Find Out (a) Personal Income and (b) Personal Disposable Income from following data:**

(Rs. In Crores)

|                                     |        |
|-------------------------------------|--------|
| 1.Private income                    | 48,800 |
| (ii) Interest on national debit     | 1,000  |
| (iii) Net factor income from abroad | 300    |
| (iv) Corporate Savings              | 800    |
| (v) ) Corporation tax               | 210    |
| (vi) Personal income tax            | 540    |

**7.From The Following Data Calculate:**

**Private Income and (b) Personal disposable income.**

(Rs. In Crores)

|   |       |
|---|-------|
| (i) Income from Domestic product accruing to the private sector   | 4,000 |
| (ii) Savings of non-departmental public enterprises               | 200   |
| (iii) Current transfer from government administrative departments | 150   |
| (iv) Savings of private corporate sector                          | 400   |
| (v) Current transfers from rest of the world                      | 50    |
| (vi) Net factor income from abroad                                | (-) 4 |
| (vii) Corporation tax   | 60    |
| (viii) Direct Personal tax  | 140   |

**8. Calculate (a) Personal Income (b) Personal Disposable Income from following data:**

(Rs. In Crores)

|   |     |
|---|-----|
| (i) Income from property and entrepreneurship accruing to<br>Government administrative department | 500 |
| (ii) Savings of non-departmental public enterprises   | 100 |



|  |       |
|--|-------|
| (iii) Corporation tax  | 80    |
| (iv) Income from Domestic product accruing to the private sector | 4,500 |
| (v) Current transfer from government administrative departments  | 200   |
| (vi) Net factor income from abroad                               | (-)50 |
| (vii) Direct Personal tax  | 150   |
| (viii) Indirect taxes  | 220   |
| (ix) Current transfers from rest of the world                    | 80    |
| (x) Savings of private corporate sector                          | 500   |

**9. From the following data calculate National Income by**

**(i) Income method and (ii) Expenditure method.**

|  |                 |
|--|-----------------|
|  | (Rs. In Crores) |
| (i) Compensation of employees                  | 1,200           |
| (ii) Net factor income from abroad             | (-)20           |
| (iii) Net indirect taxes                       | 120             |
| (iv) Profit                                    | 800             |
| (v) Private final consumption expenditure      | 2,000           |
| (vi) Net domestic capital formation            | 770             |
| (vii) Consumption of fixed capital             | 130             |
| (viii) Rent                                    | 400             |
| (ix) Interest                                  | 620             |
| (x) Mixed income of self- employed             | 700             |
| (xi) Net exports                               | (-)30           |
| (xii) Government final consumption expenditure | 1,100           |

**10. From the following data, calculate Gross national product at Market Price by**

**(i) Income method. (ii) Expenditure method:**

|  |                 |
|--|-----------------|
|  | (Rs. In Crores) |
| (i) Mixed income of self-employed              | 400             |
| (ii) Compensation of employees                 | 500             |
| (iii) Private final consumption expenditure    | 900             |
| (iv) Net factor income from abroad             | (-)20           |
| (v) Net indirect taxes                         | 100             |
| (vi) Consumption of fixed capital              | 120             |
| (vii) Net domestic capital formation           | 280             |
| (viii) Net exports                             | (-)30           |
| (ix) Profits                                   | 350             |
| (x) Rent                                       | 100             |
| (xi) Interest                                  | 150             |
| (xii) Government final consumption expenditure | 450             |

**11. Calculate (a) National Income and (b) Gross National Disposable Income from the following data**

|  |                 |
|--|-----------------|
|  | (Rs. In Crores) |
| (i) Net factor income from abroad                    | (-)20           |
| (ii) Government final consumption expenditure        | 200             |
| (iii) Subsidies                                      | 10              |
| (iv) Private final consumption expenditure           | 800             |
| (v) Net current transfers from the rest of the world | 30              |
| (vi) Net domestic fixed capital formation            | 100             |

|                                     |       |
|-------------------------------------|-------|
| (vii) Indirect taxes                | 80    |
| (viii) Consumption of fixed capital | 40    |
| (ix) Change in stock                | (-)10 |
| (x) Net exports                     | (-)50 |

**12. From the following data, calculate 'gross value added at factor cost'**

(Rs. In Crores)

|  |     |
|--|-----|
| (i) Sales                              | 500 |
| (ii) Change in stock                   | 30  |
| (iii) Subsidies                        | 40  |
| (iv) Consumption of fixed capital      | 60  |
| (v) Purchases of intermediate products | 350 |
| (vi) Profit                            | 70  |

**13. From the following data, calculate:**

**(a) National income, and (b) Personal disposable income**

(Rs. In Crores)

|  |        |
|--|--------|
| (i) Compensation of employees                      | 1,200' |
| (ii) Rent  | 400    |
| (iii) Profit                                       | 800    |
| (iv) Consumption of fixed capital                  | 300    |
| (v) Mixed income of self- employed                 | 1,000  |
| (vi) private income                                | 3,600  |
| (vii) net factor income from abroad                | (-)50  |
| (viii) net trained earnings of private enterprises | 200    |
| (ix) interest                                      | 250    |
| (x) net indirect taxes                             | 350    |
| (xi) net exports                                   | (-)60  |
| (xii) direct taxes paid by households              | 150    |
| (xiii) corporation tax                             | 100    |

**14. From the following data calculate national income by**

**(a) Income method and (b) Expenditure method.**

(Rs. In cores)

|  |       |
|--|-------|
| (i) Private final consumption expenditure              | 2,000 |
| (ii) Net capital formation                             | 400   |
| (iii) Change in stock                                  | 50    |
| (iv) Compensation of employees                         | 1,900 |
| (v) Rent   | 200   |
| (vi) Interest  | 150   |
| (vii) operating surplus                                | 720   |
| (viii) Net indirect tax                                | 400   |
| (x) Employers' contribution to social security schemes | 100   |
| (xi) Net exports                                       | 20    |
| (xii) Net factor income from aboard                    | (-)20 |
| (xii) Government final consumption expenditure         | 600   |
| (xvi) Consumption of fixed capital                     | 100   |

**15. Find gross national product at market price by income method and expenditure method.**

|    | <b>ITEMS</b>                             | <b>Rs. CRORES</b> |
|----|--|-------------------|
| a. | Mixed income of the self-employed        | 400               |
| b. | Compensation of employees                | 500               |
| c. | Private final consumption expenditure    | 900               |
| d. | Net factor income from abroad            | (-)20             |
| e. | Net indirect taxes                       | 100               |
| f. | Consumption of fixed capital             | 20                |
| g. | Net domestic capital formation           | 280               |
| h. | Net exports                              | (--) 30           |
| i. | Rent                                     | 100               |
| j. | Interest                                 | 150               |
| k. | Government final consumption expenditure | 450               |

**FREQUENTLY ASKED CBSE BOARD QUESTIONS**

1. Give two examples of macro economics (1)
2. Differentiate between micro and macroeconomics (3)
3. Distinguish between intermediate goods and final goods. (3)
4. Distinguish between domestic product and national product (3)
5. What do you understand by net factor income from abroad? Explain (3)
6. While estimating national income how will you treat the following? Give reasons for your answer (4)
  - a) Imputed rent of self occupied houses.
  - b) Interest received on debentures
  - c) Financial help received by flood victims
  - d) Capital gains
7. Distinguish between transfer payments and factor payments. Give an example of each. (4)
8. From the following data calculate national income by income method and expenditure method (6)

|  | <b>Rs in Crores</b> |
|--|---------------------|
| a) Interests                             | 150                 |
| b) Rent                                  | 250                 |
| c) Govt. final consumption expenditure   | 600                 |
| d) Private final consumption expenditure | 1200                |
| e) Profit                                | 640                 |
| f) Compensation of employees             | 1000                |
| g) Net factor income from abroad         | 30                  |
| h) Net indirect taxes                    | 60                  |
| i) Net exports                           | (-) 40              |
| j) Depreciation                          | 50                  |
| k) Net domestic capital formation        | 340                 |

## **UNIT – VII: MONEY AND BANKING**

**MEANING OF MONEY:** Money is anything which is generally accepted as medium of exchange, measure of value, store of value and as means of standard of deferred payment.

**FUNCTIONS OF MONEY:** Functions of money can be classified into Primary and Secondary

### **Primary/Basic functions:-**

- i) **Medium of Exchange:** - It can be used in making payments for all transactions of goods and services.
- ii) **Measure /Unit of value:** - It helps in measuring the value of goods and services. The value is usually called as price. After knowing the value of goods in single unit (price) exchanges become easy.

### **Secondary functions:-**

- i) **Standard of deferred payments:** Deferred payments referred to those payments which are to be made in near future.

Money acts as a standard deferred payment due to the following reasons:

- a) Value of money remains more or less constant compared to other commodities.
- b) Money has the merit of general acceptability.
- c) Money is more durable compare to other commodity.

- ii) **Store of value:** Money can be stored and does not lose value

Money acts as a store of value due to the following reasons:

- a) It is easy and economical to store.
- b) Money has the merit of general acceptability.
- c) Value of money remains relatively constant

### **MONEY HAS OVERCOME THE DRAW BACKS OF BARTER SYSTEM:**

1. **Medium of Exchange:** Money has removed the major difficulty of the double coincidence of wants.
2. **Measure of value:** Money has become measuring rod to measure the value of goods and services and is expressed in terms of price.
3. **Store of value:** It is very convenient, easy and economical to store the value and has got general acceptability which was lacking in the barter system.
4. **Standard of deferred payments:** Money has simplified the borrowing and lending of operations which were difficult under barter system. It also encourages capital formation.

**MONEY SUPPLY:** refers to total volume of money held by public at a particular point of time in an economy.

$M1 = \text{currency held by public} + \text{Demand deposits} + \text{other deposits with Reserve Bank of India.}$

$M2 = M1 + \text{saving deposits with post office saving bank}$

$M3 = M1 + \text{net time deposit with the bank}$

$M4 = M3 + \text{total deposits with post office saving bank excluding national saving certificate}$

**HIGH POWERED MONEY:**

Refers to, currency with the public (notes + coins) and cash reserve of banks.

### **MONEY CREATION/DEPOSIT CREATION/CREDIT CREATION BY COMMERCIAL BANK**

Let us understand the process of credit creation with the following example.

Suppose there is an initial deposit of Rs. 1000 and L.R.R. is 20% i.e., the banks have to keep Rs. 200 and lend Rs. 800/-. All the transactions are routed through banks. The borrower withdraws his Rs. 800/- for making payments which are routed through banks in the form of deposits account.

The Bank receives Rs. 800/- as deposit and keeps 20% of Rs.800/- i.e., Rs.160/- and lends Rs.640/- . Again the borrower uses this for payment which flows back into the banks thereby increasing the flow of deposits.

|                 | <b>Deposits<br/>(in Rs.)</b> | <b>Loans (in Rs.)</b> | <b>Cash Reserve<br/>Ratio<br/>(20%)</b> |
|-----------------|------------------------------|-----------------------|---|
| Initial deposit | 1000                         | 800                   | 200                                     |
| First round     | 800                          | 640                   | 160                                     |
| Second round    | 640                          | 512                   | 128                                     |
| -               | -                            | -                     | -                                       |
| -               | -                            | -                     | -                                       |
| -               | -                            | -                     | -                                       |
| -               | -                            | -                     | -                                       |
| Total           | 5000                         | 4000                  | 1000                                    |

### **MONEY MULTIPLIER:**

Money Multiplier =  $1/\text{LRR}$ . In the above example LRR is 20% i.e., 0.2, so money multiplier is equal to  $1/0.2=5$ .

**Why only a fraction of deposits is kept as Cash Reserve?**

- All depositors do not withdraw the money at the same time.
- There is constant flow of new deposits into the banks.

## **CENTRAL BANK**

**MEANING:** An apex body that controls, operates, regulates and directs the entire banking and monetary structure of the country.

### **FUNCTIONS OF CENTRAL BANK:**

- i) **Currency authority or bank of issue:** Central bank is a sole authority to issue currency in the country. Central Bank is obliged to back the currency with assets of equal value (usually gold coins, gold bullions, foreign securities etc.,)

Advantages of sole authority of note issue:

- a) Uniformity in note circulation
  - b) Better supervision and control
  - c) It is easy to control credit
  - d) Ensures public faith
  - e) Stabilization of internal and external value of currency
- ii) **Banker to the Government:** As a banker it carries out all banking business of the Government and maintains current account for keeping cash balances of the government. Accepts receipts and makes payments for the government. It also gives loans and Advances to the government.
- iii) **Banker's bank and supervisor:** Acts as a banker to other banks in the country—
- a) **Custodian of cash reserves:-** Commercial banks must keep a certain proportion of cash reserves with the central bank (CRR)
  - b) **Lender of last resort:** - When commercial banks fail to meet their financial requirements from other sources, they approach Central Bank which gives loans and advances.
  - c) **Clearing house:** - Since the Central Bank holds the cash reserves of commercial banks it is easier and more convenient to act as clearing house of commercial banks.
- iv) **Controller of money supply and credit:** - Central Bank or RBI plays an important role during the times of economic fluctuations. It influences the money supply through quantitative and qualitative instruments. Former refers to the volume of credit and the latter refers to regulate the direction of credit.
- v) **Custodian of foreign exchange reserves.**

Another important function of Central Bank is the custodian of foreign exchange reserves. Central Bank acts as custodian of country's stock of gold and foreign exchange

reserves. It helps in stabilizing the external value of money and maintaining favorable balance of payments in the economy.

#### QUANTITATIVE INSTRUMENTS:

- i) **Bank Rate policy:** - It refers to the rate at which the central bank lends money to commercial banks as a lender of the last resort.  
Central Bank increases the bank rate during inflation (excess demand) and reduces the same in times of deflation (deficient demand)
- ii) **Open Market Operations:** It refers to the buying and selling of securities by the Central Bank from/ to the public and commercial banks.  
It sells government securities during inflation/excess demand and buys the securities during deflation/deficient demand.
- iii) **Legal Reserve Ratio:** R.B.I. can influence the credit creation power of commercial banks by making changes in CRR and SLR  
*Cash Reserve Ratio (CRR):* It refers to the minimum percentage of net demand and time liabilities to be kept by commercial banks with central bank.  
Reserve Bank increases CRR during inflation and decreases the same during deflation  
*Statutory Liquidity Ratio (SLR):* It refers to minimum percentage of net demand and time liabilities which commercial banks required to maintain with themselves.  
SLR is increased during inflation or excess demand and decreased during deflation or deficient demand.

#### QUALITATIVE INSTRUMENTS:

1. Margin Requirements: It is the difference between the amount of loan and market value of the security offered by the borrower against the loan.  
Margin requirements are increased during inflation and decreased during deflation.
2. Moral suasion: It is a combination of persuasion and pressure that Central Bank applies on other banks in order to get them act in a manner in line with its policy.
3. Selective credit controls: Central Bank gives direction to other banks to give or not to give credit for certain purposes to particular sectors.

#### SHORT AND LONG ANSWER QUESTIONS

1. Define Central Bank.
2. Give the meaning of money.
3. Discuss the functions of money.
4. Describe how money over comes the problems of barter system?

5. What are the measures of money supply?
6. What do you mean by High powered money?
7. Describe the process of money creation or credit creation by commercial banks.
8. Why only a fraction of deposits is kept as Cash Reserves?
9. Discuss the functions of Central Bank.
10. Bring out the role of Central Bank as the controller of money supply or credit
11. Explain the various qualitative and quantitative instruments used by the central bank in controlling the money supply during the times of a) excess demand/inflation b) deficient demand/deflation.

### **HOTS**

- 1. Calculate the value money multiplier and the total deposit created if initial deposit is of Rs. 500 crores and LRR is 10%.**

Ans: Money multiplier =  $1/\text{LRR}$  which is equal to  $1/0.1=10$

Initial deposit Rs. 500 crores

Total deposit = Initial deposit x money multiplier  
 $= 500 \times 10 = 5000$  crores.

- 2. If total deposits created by commercial banks are Rs.12000, LRR is 25% calculate initial deposit.**

Ans: Money multiplier =  $1/\text{LRR} = 1/.25 = 4$

Initial deposit = Total deposit / money multiplier =  $12000/4 = 3000$

- 3. Calculate LRR, if initial deposit of Rs. 200 cores lead to creation of total deposits of Rs. 1600 cores.**

Ans: Money multiplier = Total deposits/Initial deposits =  $1600/200=8$

Money multiplier =  $1/\text{LRR} = 8=1/\text{LRR}$ .

LRR = 1.25 or 12.5

### **FREQUENTLY ASKED CBSE BOARD QUESTIONS**

#### ***One Mark Questions (1M)***

1. Define money.
2. M1 = .....
3. What is meant by barter system?
4. Write two drawbacks of barter exchange.
5. List out two main functions of money.
6. Define commercial bank.



7. Give the meaning of central bank.
8. What do you mean by credit creation by commercial banks.
9. Define bank rate.
10. Define cash reserve ratio.
11. Give the meaning of statutory liquidity ratio.
12. What is meant by open market operations (OMO)?
13. Define money supply.
14. Write one difference between commercial bank and central bank.
15. Mention two important functions of central bank.

### ***Three Marks Questions (3M)***

1. Explain briefly any two main functions of money.
2. How does the central bank apply bank rate as a measure of credit control?
3. What are the components of M1?
4. State any THREE functions of central bank. Explain any one.
5. Explain the “lender of last resort” function of central bank.
6. What is money multiplier?
7. Explain briefly any three drawbacks of barter system
8. Explain the open market operations method of credit control used by a central bank.

### ***Four Marks Questions (4 M)***

1. Distinguish between commercial banks and central bank.
2. Explain how money solves the drawbacks of barter exchange.
3. What is money multiplier? How will you determine its value?
4. Briefly explain any TWO quantitative measures of credit control by the central bank.
5. Explain briefly the credit creation by commercial banks with the help of an example.

## **Unit VIII: Determination of Income and Employment**

### **Key concepts**

- ❖ Aggregate demand and its components.
- ❖ Propensity to consume and propensity to save
- ❖ Short run fixed price in product market equilibrium output, investment or output multiplier and the multiplier mechanism.
- ❖ Meaning of full employment and involuntary unemployment.
- ❖ Problems of excess demand and deficient demand.
- ❖ Measures to correct excess demand and deficient demand.
- ❖ Change in government spending.
- ❖ Availability of credit.
- ❖ **Autonomous consumption:** The consumption which does not depend upon income. (Or) The amount of consumption expenditure when income is zero.  $C > 0$ . Even if income is zero consumption cannot be zero. Consumption will take place from past savings for survival.
- ❖ **Autonomous Investments:** It is Investment which is made irrespective of level of income. It is generally run by the government sector. It is income inelastic. The volume of autonomous investment is same at all level of income.

### **Key points**

- ❖ Determination of income, output and employment is the core of the subject matter of macroeconomics.
- ❖ AD and AS together determine the level of income, output and employment.
- ❖ Aggregate demand is the total demand of goods and service in the economy.
- ❖ **The main components of AD are-**
  1. House hold consumption expenditure.
  2. Investment expenditure.
  3. Government consumption expenditure
  4. Net export.
- ❖ **Household consumption expenditure** is the expenditure incurred by the household on the purchase of goods and services to satisfy their wants.
- ❖ **Investment expenditure** refers to the expenditure incurred by the private firms and government on the purchase of capital goods such as plant and equipment.
- ❖ **Government consumption** expenditure refers to the expenditure incurred by the government on the purchase of goods and services.
- ❖ **Net export** refers to the difference between export and import.
- ❖  **$AD = C + I + G + (x - m)$ .**
- ❖ In a two sector economy  $AD = C + I$ .
- ❖ Aggregate supply is the sum total of consumption expenditure and saving.  
 $AS = C + S$

### **PROPENSITY TO CONSUME AND PROPENSITY TO SAVE.**

- ❖ The relationship between consumption and income is called propensity to consume or consumption function.
  1.  $C = f(Y)$ .
- ❖ Consumption function may be represented by an equation.  
 $C = a + b(Y)$   
 $C$ =consumption,  $a$  =consumption at zero level of income  $b$ =MPC (slope of the consumption curve)  $Y$ =income.  
The consumption equation shows the level of consumption for various level of income.
- ❖ Propensity to consume is of two types
  - A) Average propensity to consume (APC)
  - B) Marginal propensity to consume (MPC).
- ❖  $APC$ = ratio of total consumption to total income.  
 $APC = C/Y$ .
- ❖  $MPC = \Delta C / \Delta Y$ .
- ❖ Propensity to save indicates the tendency of the households to save at a given level of income. It shows the relation between saving and income.
- ❖ Propensity to save is also of two types.
  - A. Average propensity to save (APC)
  - B. Marginal propensity to save.(MPC)
- ❖ Average propensity to save is the ratio of saving to income  
 $APC = S/Y$ .

- ❖ Marginal propensity to save is the ratio of change in saving to change in income  
 $MPS = \Delta S / \Delta Y$ .
- ❖ There is relationship between APC and APS.  
 $APC + APS = 1$   
 $APC = 1 - APS$ .
- ❖ There is relationship between MPC and MPS.  
 $MPC + MPS = 1$   
 $1 - MPC = MPS$ .

#### **Meaning of involuntary unemployment and full employment.**

- ❖ Involuntary unemployment refers to a situation in which people are ready to work at prevailing wage rate, but do not find work.
- ❖ Full employment refers to a situation in which no one is unemployed i.e....there is no involuntary unemployment.
- ❖ According to Keynes full employment signifies a level of employment where increase in aggregate demand does not lead to an increase in the level of output and employment.  
 Increase in demand beyond full employment causes prices to go up.

#### **DETERMINATION OF INCOME AND EMPLOYMENT.**

- ❖ The determination of income and employment in the Keynesian theory depends on the level of AD and AS.
- ❖ Equilibrium level of income and output is determined where,  
 1)  $AD = AS$     2) Planned saving = planned investment.
- ❖ In a two sector economy  $Ad = C + I$ ,  $AS = Y$ ,  $Y = C + I$ .
- ❖ Suppose that  $C = 40 + 0.75Y$  (CONSUMPTION FUNCTION) and  $I = Rs.60$  (investment function) then the equilibrium level of income is obtained as  
 $Y = C + I$   
 $Y = 40 + 0.75Y = 60$   
 $Y - 0.75Y = 100$   
 $0.25Y = 100$   
 $Y = 10000 / 25$   
 $Y = 400 \text{ crores.}$
- ❖ Investment multipliers and its working.
- ❖ Investment multiplier explains the relationship between increase in investment and the resultant increase in income.
- ❖ Investment multiplier is the ratio of change in income to change in investment.  
 $\text{Multiplier } (k) = \Delta y / \Delta I$ .
- ❖ The value of multiplier depends on the value of marginal propensity to consume (MPC).
- ❖ There is direct relationship between  $k$  and MPC.
- ❖ Multiplier also depends on the marginal propensity to save
- ❖ There is inverse relationship between multiplier and MPS.

### IMPORTANT FORMULAE.

- ❖  $AD=C+I$  (two sector economy).
  - ❖  $APC=C/Y$ .
  - ❖  $APS=S/Y$ .
  - ❖  $APC+APS=1$
  - ❖  $MPC=\Delta C/\Delta Y$
  - ❖  $MPS=\Delta S/\Delta Y$
  - ❖  $MPS+MPC=1$  AND  $1-MPC=MPS$
  - ❖  $K=\Delta Y/\Delta C$  or  $K=1/MPS$  or  $K=I/I-MPC$
  - ❖  $C=\bar{c}+b(Y)$
  - ❖  $S=-a+(1-b)Y$
- $\bar{c}$ = autonomous consumption  
 $-a$ = negative saving  
 $(1-b)=MPS$

### SHORT RUN FIXED PRICE ANALYSIS

#### Basic Concept

Assumption

1) Fixed Price :

In the short period price is fixed (constant) and elasticity of supply is infinite i.e., supply curve is perfectly elastic. It means the suppliers are willing to supply whatever amount of goods, consumer will demand at that price.

2) Fixed Interest Rate : Interest rate remains constant.

3) Aggregate supply is perfectly elastic at this price.

Under these circumstances equilibrium output will be determined by aggregate demand at this price in the economy. At a fixed price the value of ex-ante aggregate demand for final goods is the sum of ex-ante consumption expenditure  $C$  and ex-ante investment expenditure  $I$  on final goods.

$$AD=C+I$$

$$\text{Consumption function } C = \bar{c} + b(Y)$$

$\bar{c}$  = Autonomous consumption

$b$  = marginal propensity to consume due to unit increase in income

In the short period, price and rate of interest remaining constant i.e., ex-ante Investment expenditure is uniform i.e. same amount every year.

$$\text{Hence, } I = I$$

$I$  = Autonomous Expenditure

we also assume that Aggregate Supply at this cost price is determined by aggregate demand which is known as Effective demand principle. The level of AD required to achieve full

employment equilibrium is called effective demand. (or) AD at the point of equilibrium is called Effective demand.

$AD = C + I$  (By substituting the value of consumption function)

$$AD = C + I + bY$$

When final good market is in equilibrium, quantity demanded = quantity supplied

$$AD = AS$$

$$Y = C + I + bY$$

$$Y = A + bY \quad (A = C + I \text{ showing total autonomous expenditure})$$

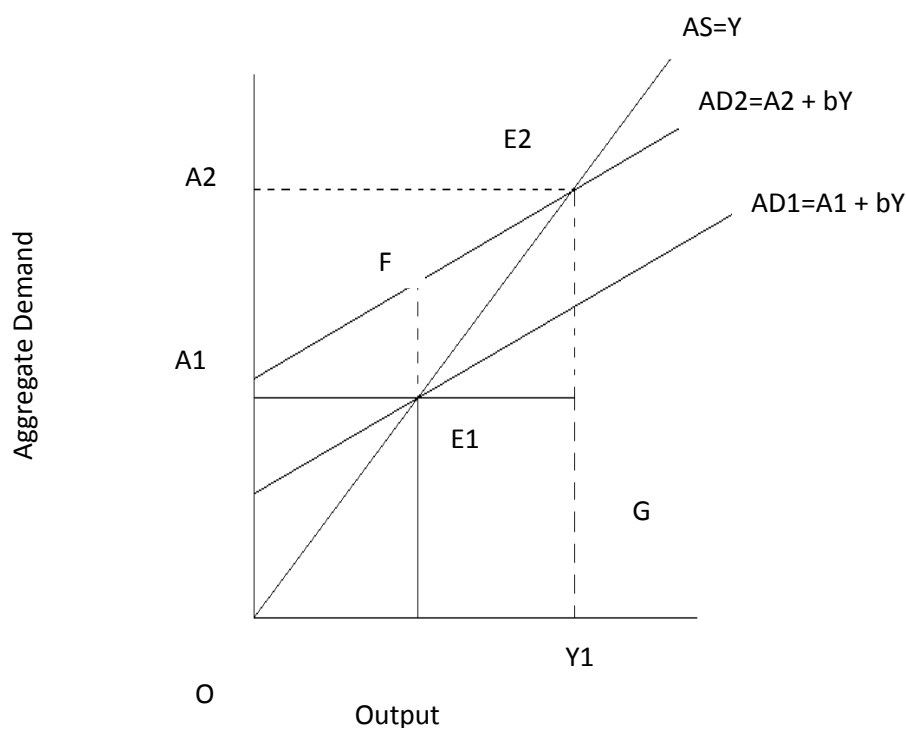
$$Y - bY = A$$

$$Y(1 - b) = A$$

$$Y = A / 1 - b$$

Y depends upon A (C (or) I) or MPC.

Effects of an autonomous change on equilibrium in the product market.



The line AD1 and AD2 correspond to the values of A, via A1 and A2 respectively

AS is the 45° line is equal to one

The 45° line represents point at which AD and output are equal.

The AD1 line intersects the 45° line at point E1.

At equilibrium point the equilibrium values of output and aggregate demand are OY1 and AD1.

When autonomous investment increases the AD1 line shifts upwards and assumes the position AD2.

The value of aggregate demand at output OY1 is Y1F which is greater than the value of output OY1 = Y1E1 by an amount E1F

- E1F measures the amount of excess demand that emerges in the economy as a result of the increase in autonomous expenditure: The new AD2 intersects the 45° line at point E2 at the new equilibrium output and AD2 have increased by an amount E2G which is greater than the initial increment in autonomous expenditure E1F.

### **1 MARK QUESTIONS**

**1. What is the relation between APC and APS?**

Ans.  $APC + APS = 1$

**2. What is the relation between MPC and MPS?**

Ans.  $MPS + MPC = 1$ .

**3. If APC is 0.7 then how much will be APS?**

Ans.  $1 - 0.7 = 0.3$

**4. If MPC = 0.75, what will be MPS?**

Ans.  $MPC + MPS = 1$

$1 - 0.75 = 0.25$

**5. State the important factor influencing the propensity to consume in an economy?**

Ans. The level of income (Y) Influences the propensity to consume (c) of an economy.

**6. What is meant by investment?**

Ans. Investment means addition to the stock of capital good, in the nature of structures, equipment or inventory.

**7. What is the investment demand function?**

Ans. The relationship between investment demand and the rate of interest is called investment demand function.

**8. What is equilibrium income?**

Ans. The equilibrium income is the level of income where  $AD = AS$  i.e.... $AD = AS$  and planned saving equals planned investment.

**9. Give the formula of investment multiplier in terms of MPC.**

Ans.  $K = 1/1 - MPC$

**10. What can be the minimum value of investment multiplier?**

Ans. One.

**11. What is the maximum value of investment multiplier?**

Ans. Infinity.

**12. Give the equation of propensity to consume.**

Ans.  $C = \bar{a} + by$ .

**13. Write down the equation of saving function?**

Ans.  $S = -a + (1-b) y$ .

**3 AND 4 MARKS QUESTIONS.**

**1. Explain the components of equation  $c = \bar{a} + by$ .**

Ans. 'a' is called intercept and it represents the amount of consumption when there is a zero level of income i.e. autonomous consumption. The consumption is positive at zero level of income. The coefficient 'b' measures the slope of consumption. The slope gives the increase in consumption per unit increase in income. This is called as MPC. Consumption changes by 'b' for every one rupee change in income. Consumption changes in the same direction as income.

**2. Derive the saving function from the consumption function  $c = \bar{a} + by$ .**

Ans. Saving is equal to income minus consumption ( $y = c + s$ ). The saving function relates to the level of savings to the level of income. It is derived from the consumption which is as follows:

$$Y = C + S$$

$$S = Y - C$$

$$\text{since } C = \bar{a} + bY.$$

therefore,

$$S = Y - (\bar{a} + bY)$$

$$S = -\bar{a} + (1-b)Y \quad (\text{SAVING FUNCTION}).$$

**3. Explain the components of  $S = -a + (1-b) Y$ .**

Ans. The saving function is  $S = -a + (1-b) Y$ . -a represents the intercept term and it represents the amount of savings done when there is zero level of income. The saving is negative at zero level of income because at zero level of income consumption (a) is positive. Negative saving is nothing but dissaving, this means that at zero level of income there is dissaving of amount -a.

The coefficient (1-b) measures the slope of the saving function. The slope of the saving function gives the increase in savings per unit increase in the income. This is known as MPS. Since 'b', that is MPC is less than one, it follows that (1-b) i.e. MPS is positive. Saving is an increasing function of income.

**4. Can the value of APS be negative? If yes then when?**

Ans. The value of APS can be negative when the value of consumption exceeds the value of income. At low level of income saving is negative.

e.g.: if income is Rs 1000 and consumption expenditure is Rs 1200

$$Y = C + S \quad S = Y - C$$

$$1000 - 1200 = -200$$

$$APS = -200/1000 = -0.2 \quad APS = S/Y.$$

$$APS = -0.2.$$

**5. Can the average propensity to consume be greater than one? Give the reason for your answer.**

Ans. APC can be greater than one when the consumption exceeds the income. At that level APS will be negative .when the APS is negative APC will be greater than one.

e.g.: if the income is 1000 and the consumption is 1200,  $APC = 1200/1000 = 1.20$ .

**6. When can the APC be equal to one? Give reason for your answer.**

Ans. APC can be equal to one when  $APS = 0$ , i.e when consumption = income.

E.g:  $y = 1000$ ,  $c = 1000$ .

$$APC = C/Y \quad 1000/1000 = 1$$

$$APC = 1$$

$$APC + APS = 1$$

$$1 - APC = APS$$

$$1 - 1 = 0$$

**7. Explain the meaning of investment multiplier? What can be its minimum value and why?**

Ans. Defined as the ratio of change in the income to the change in the investment.

$$K = \Delta Y / \Delta I$$

The value of the multiplier is determined by the MPC. It is directly related to MPC.

$$K = 1 / 1 - mpc = 1 / 1 - 0 = 1$$

$$K = 1$$

Minimum value of K is when minimum value of  $MPC = 0$ , the minimum value of K will be unit one.

**8. Explain the working of a multiplier with an example.**

Ans. Multiplier tells us what will be the final change in the income, as a result of change in investment. Change in investment results in the change in income. Symbolically:

$$\Delta I \rightarrow \Delta Y \rightarrow \Delta C \rightarrow \Delta Y$$

The working of a multiplier can be explained with the help of the following table which is based on the consumption that is,  $\Delta I = 1000$  and  $MPC = 4/5$ .

PROCESS OF INCOME GENERATION.

| ROUNDS              | $\Delta I$          | $\Delta Y$          | $\Delta C$               |
|---------------------|---------------------|---------------------|--------------------------|
| 1.                  | 1000                | 1000                | $4/5 \times 1000 = 800$  |
| 2.                  | -                   | 800                 | $4/5 \times 800 = 640$   |
| 3.                  | -                   | 640                 | $4/5 \times 640 = 512$   |
| 4.                  | -                   | 512                 | $4/5 \times 512 = 409.6$ |
| $\downarrow \infty$ | $\downarrow \infty$ | $\downarrow \infty$ | $\downarrow \infty$      |
|                     | TOTAL               | 5000                | 4000                     |

As per the table the initial increase in the investment of Rs 1000 there is a total increase in the income by Rs 5000 given  $MPC = 4/5$  . Out of this total increase in the income Rs 4000 will be consumed and Rs 5000 be saved.

The sum of total increase in income is also derived as:

$$\Delta y = 1000 + 800 + 640 + 512 + \dots \dots \dots \text{infinity.}$$



$$1000 + 4/5 \times 1000 + (4/5)^2 \times 1000 + (4/5)^3 \times 1000 + \dots \text{infinity}$$

$$= 1000 [1 + 4/5 + (4/5)^2 + (4/5)^3 + \dots \text{infinity}]$$

$$= 1000 [1/1 - 4/5] = 1000 \times 5/1 = \text{Rs. 5000 cores.}$$

### 9. Differentiate between ex ante and ex post investment.

Ans. Ex ante is the planned investment which the planner intends to invest at different level of income and employment in the economy.

Ex post investment may differ from ex ante investment when the actual sales differ from the planned sales and the firms thus face unplanned addition or reduction of inventories.

## 6 MARKS QUESTIONS WITH ANSWERS

### 1. Draw a hypothetical propensity to consume curve from it draw the propensity curve to save curve

Ans.  $APC = C/Y$        $APS = S/Y$

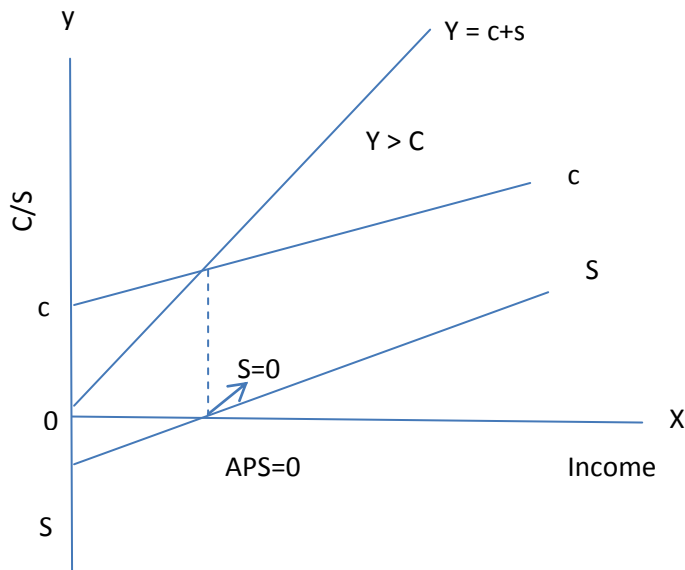
Propensity to save curve

Is drawn from propensity to consume curve

When  $Y = C$        $APC = 1$

Till that point APS is negative at point's'

When  $y > c$  there is a positive saving



### 2. Explain the determination of income and employment with AD and AS. (Give schedule)

$AD = C + I$

$AS = C + S$        $AS = Y$  (refers to countries national income)

The equilibrium level of income is determined at a point when  $AD = AS$ .

Equilibrium can be achieved at full employment and even at under employment situation.

It may not be always at full employment condition in an economy.

| y   | c   | I   | AD=C+I | AS=Y |       |
|-----|-----|-----|--------|------|-------|
| 0   | 50  | 100 | 150    | 0    |       |
| 100 | 100 | 100 | 200    | 100  |       |
| 200 | 150 | 100 | 250    | 200  |       |
| 300 | 200 | 100 | 300    | 300  | AD=AS |
| 400 | 250 | 100 | 350    | 400  |       |
| 500 | 300 | 100 | 400    | 500  |       |

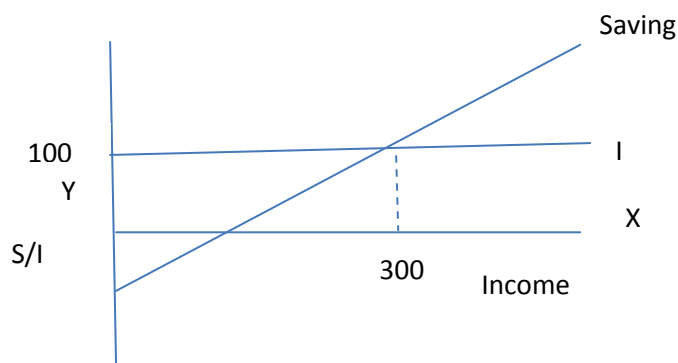
The above schedule shows equilibrium level of income is 300 where  $AD=AS$   $300=300$ .

1. Explain the equilibrium level of income, employment and output with saving and investment approach. What happens when savings exceeds investment?

Ans. Equilibrium is achieved when planned saving is equal to planned investment that is  $S=I$ .

This can be seen with the help of schedule and a diagram.

| INCOME | CONSUMPTION | SAVING      | INVESTMENT |     |
|--------|-------------|-------------|------------|-----|
| Y      | C           | ( $S=Y-C$ ) | I          |     |
| 0      | 50          | -50         | 100        |     |
| 100    | 100         | 0           | 100        |     |
| 200    | 150         | 50          | 100        |     |
| 300    | 200         | 100         | 100        | S=I |
| 400    | 250         | 150         | 100        |     |



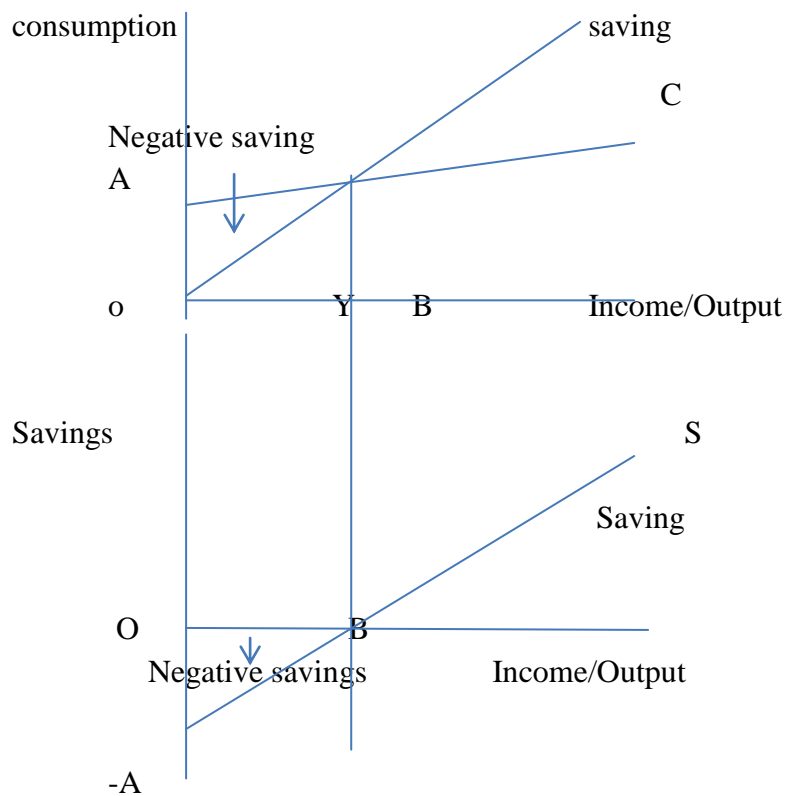
The equilibrium level of income is 300 and at this point  $S (100) = I (100)$  the equilibrium may necessarily not be at the full employment level.

When saving exceeds planned investment means people are consuming less and spending more as a result  $AD$  is less than  $AS$ .

This will lead to accumulation of more goods with producer. This will make the businessmen to reduce production consequently, output, income & employment will be reduced till the equilibrium level of income.

2. Draw a straight line consumption curve. From it derive a saving curve explaining the process. Show on the diagram.

- The level of income at which average propensity to consume equal to one.
- A level of income at which average propensity to save is negative.



Ac is the consumption curve and OA is the consumption expenditure at zero level of income. Income minus consumption is saving.

When income is 0, the economy's consumption level is OA. The corresponding level of saving is -OA.

So -a is the starting point of saving curve. At OB level of income consumption is equal to income, so saving are zero. so B is another point on saving curve .

Join A and B and extend this line to S, AS is the saving curve.

- The level of income at which APC is equal to one is OB.
- A level of income at which APS is negative OY.

### NUMERICALS.

- If in an economy investment increases by Rs 1000 cores to Rs 1200 cores and as a result total income increases by 800 cores calculate capital MPS.

Ans.  $\Delta I = 1200 - 1000 = 200$

$\Delta Y = 800$

$\Delta K = \Delta Y / \Delta I = 800 / 200 = 4$

$K = 1 / MPS = 4$

$MPS = 1 / 4 = 0.25$

$MPS = 0.25$

2. IF in an economy the actual level of income is Rs 500crores whereas the full employment the level of income is RS 800 cores. The MPC=0.75 calculate the increase in investment required to achieve full employment income.

Actual income=Rs500 cores

Full empl Income = Rs 800 cores

$\Delta y = 800 - 500 = 300$  cores

$$MPC = 0.75 = \frac{75}{100} = \frac{3}{4}$$

$$K = \frac{1}{1 - MPC} = \frac{1}{1 - 0.75} = \frac{1}{0.25} = \frac{100}{25} = 4$$

We know that  $\Delta y = K \cdot \Delta I$

$$300 = 4 \times \Delta I$$

$$\Delta I = 75 \text{ cores}$$

### 3. Calculation of APC and MPC given the level of Income and Consumption

| Income | consumption | APC = c/y | MPC = $\Delta c / \Delta y$ |
|--------|-------------|-----------|-----------------------------|
| 0      | 4           | -         | -                           |
| 10     | 12          | 1.20      | 0.80                        |
| 20     | 20          | 1.00      | 0.80                        |
| 30     | 28          | 0.93      | 0.80                        |
| 40     | 36          | 0.90      | 0.80                        |

### 4. Calculation of APS and MPS given the level of Income and consumption

| Income<br>(Rs in crores) | consumption<br>(Rs in crores) | saving | APS   | MPS  |
|--------------------------|-------------------------------|--------|-------|------|
| 0                        | 4                             | -4     | -     | -    |
| 10                       | 12                            | -2     | -0.20 | 0.20 |
| 20                       | 20                            | 0      | 0.00  | 0.20 |
| 30                       | 28                            | 2      | 0.07  | 0.20 |
| 40                       | 36                            | 4      | 0.10  | 0.20 |

Clue: APS =  $s/y$       MPS =  $\Delta s / \Delta y$       S = Y - C

5. Suppose the consumption equals  $c = 40 + 0.75 y$ , Investment equals  $I = \text{Rs } 60$  and  $Y = C + I$ . Find i) Equilibrium level of income ii) The level of consumption at equilibrium iii) level of saving at equilibrium

Ans: i)  $Y = C + I$       AS = AD

Substituting the value of c and I we get

$$Y = 40 + 0.75y + 60$$

$$Y = C + I$$

$$I = 60$$

$$(Y - 0.75y) = 100$$

$$(1 - 0.75)Y = 100$$

$$0.25Y = 100$$

$$Y = 100 / 0.25$$

$$Y = 10000 / 25$$

$$Y = 400$$

**Equilibrium level of income = Rs. 400 cr.**

ii)  $AS = AD$

$$C = 40 + 0.75y$$

$$Y = 400$$

$$C = 40 + 0.75(400) = 340$$

$$C = 340$$

iii)  $Y = C + S$                       So  $S = Y - C$

$$S = 400 - 340 = 60$$

$$S = 60 \text{ crores}$$

**6. In a two sector economy, the saving and investment functions are:**

$$S = -10 + 0.2Y$$

$$I = -3 + 0.1Y$$

**What will be the equilibrium level of income?**

Ans: Equilibrium level of income  $S = I$

$$-10 + 0.2y = -3 + 0.1y$$

$$0.2y - 0.1y = -3 + 10$$

$$0.1y = 7$$

$$y = 70$$

**7. Explain the components of the equation  $C = 20 + 0.90y$  and construct a schedule for consumption where income is Rs 200 , Rs 300 , Rs 350 and Rs 400.**

Components of equation  $c = 20 + 0.90y$  explained in  $\frac{3}{4}$  mark question number 1

The schedule for consumption is as follows

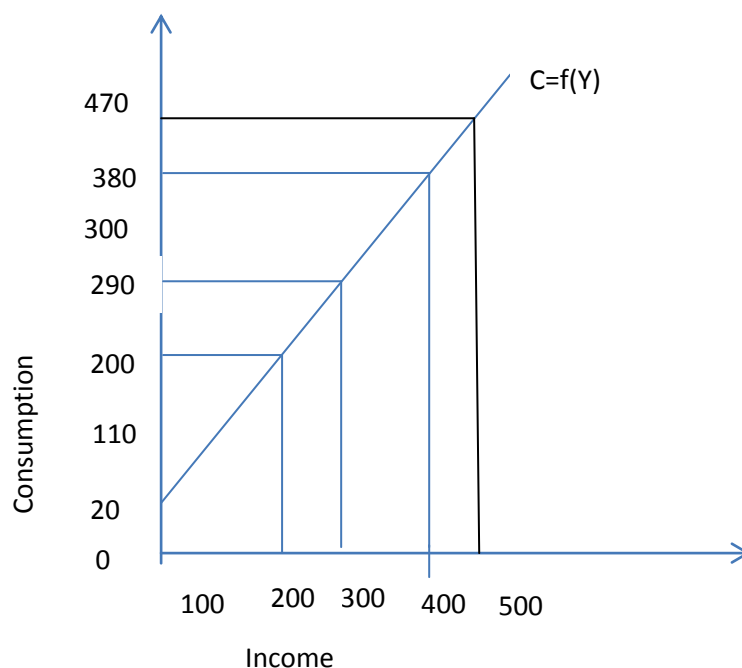
| Y (Income) | $c = 20 + 0.90y$ |                                 |
|------------|------------------|---------------------------------|
| 200        | 200              | $c = 20 + 0.9 \times 200$       |
| 250        | 245              | $= 20 + 180 = 200$              |
| 300        | 290              | $c = 20 + 0.9 \times 250$       |
| 350        | 335              | $= 20 + 225 = 245$              |
| 400        | 380              | $c = 20 + 0.9 \times 300 = 290$ |
|            |                  | $C = 20 + 0.9 \times 350 + 335$ |
|            |                  | $C = 20 + 0.9 \times 400 = 380$ |

**8. The consumption function is  $C = 20 + 0.9y$ . The value of Income is given as 100, 200, 300, 400 and 500. Find out the consumption schedule and draw the consumption curve.**

The consumption schedule

| Y (Income) | $C = 20 + 0.9 Y$         |
|------------|--------------------------|
| 0          | $C=20$                   |
| 100        | $C=20 + 0.9 (100) = 110$ |
| 200        | $C=20 + 0.9 (200) = 200$ |
| 300        | $C=20 + 0.9 (300) = 290$ |
| 400        | $C=20 + 0.9 (400) = 380$ |
| 500        | $C=20 + 0.9 (500) = 470$ |

The consumption curve is shown as



**9. How is equilibrium output of final goods determined under short run fixed price?**

Under short run fixed price, equilibrium output and equilibrium demand at fixed price and constant rate of interest can be found with the help of following formulas

$$Y = \frac{\bar{A}}{1 - b}$$

$Y =$  Value of equilibrium output

$\bar{A}$  = Total Autonomous consumption

$b$  = MPC

Thus, value of equilibrium output ( $y$ ) depends on values of  $\bar{A}$  (i.e.,  $\bar{c} + \bar{I}$ ) and  $b$

$$\text{i.e } AD = AS$$

$$\bar{Y} = \bar{C} + \bar{I} + b\bar{Y}$$

$$\bar{Y} = A + b\bar{Y} \quad (\bar{A} = \bar{C} + \bar{I} \text{ showing total autonomous expenditure})$$

$$\bar{Y} - b\bar{Y} = \bar{A}$$

$$\bar{Y}(1-b) = \bar{A}$$

$$\bar{Y} = \frac{\bar{A}}{1-b}$$

$$\bar{Y} = \frac{\bar{A}}{1-b}$$

### Application level questions

#### Multiplier

1. In an economy an increase in investment leads to increase in national income which is three times more than the increase in investment (calculate marginal propensity to consume)
2. In an economy the MPC is 0.95 investment is increased by Rs. 100 crores. Calculate the total increase in income and consumption expenditure.
3. Explain with numerical example how an increase in investment in an economy affects the level of consumption.
4. An increase in investment leads to total rise in national income by Rs. 500 crores. If MPC is 0.9 what is the increase in investment? Calculate.
5. In an economy the MPC is 0.8 Investment is increased by Rs.500 crores. Calculate the total increase in income and consumption expenditure.
6. If in an economy MPC is 0.75 and its investment is increased by Rs.500 crores. Calculate the total increase in income and consumption expenditure
7. Complete the table

| Income | MPC | Saving | APS |
|--------|-----|--------|-----|
| 0      | -   | -90    | -   |
| 100    | 0.6 | -      | -   |
| 200    | 0.6 | -      | -   |
| 300    | 0.6 | -      | -   |

8. In an economy  $S = -50 + 0.5Y$  is the saving function (where S=saving and Y=national income) and investment expenditure is 7000. Calculate  
 (i) Equilibrium level of national income  
 (ii) Consumption expenditure at Equilibrium level of N.I
9. From the following information about an economy calculate  
 (i) its Equilibrium level of national income and  
 (ii) saving at Equilibrium level of N.I

Consumption function =  $200 + 0.9Y$

Investment expenditure  $I=3000$ .

10. Disposable income is Rs. 1000 crores and consumption expenditure is Rs.750 crores. Find out average propensity to save and average propensity to consume.
11. In an economy investment expenditure increased by Rs.700 crores. The marginal propensity to consume is 0.9 calculate total increase in income and consumption expenditure
12. Complete the following table

| Level of income | Consumption Expenditure | Marginal Propensity | Marginal Propensity to consume |
|-----------------|-------------------------|---------------------|--------------------------------|
| 400             | 240                     |                     |                                |
| 600             | 320                     |                     |                                |
| 700             | 465                     |                     |                                |

13. In an economy an increase in investment leads to increase in national income which is three times more than the increase in investment calculate marginal propensity to consume.
14. The disposable income is Rs.2500 crores and saving is Rs.500 crores. Find out average propensity to consume
15. In an economy MPC is 0.75 if investment expenditure is increased by Rs.500 crores. Calculate the total increase in income and consumption expenditure
16. As a result of increase investment by 125 crores national income increased by 500 crores. Calculate multiplier, MPC and MPS.
17. Given consumption function  $C=100+0.75 Y$  (where C=consumption expenditure and Y=national income) and investment expenditure Rs.2000 .calculate  
(i) Equilibrium level of national income  
(ii) Consumption expenditure at equilibrium level of income
18. In an economy  $S= -50+0.5Y$  is the saving function (where S=saving and Y=national income) and investment expenditure is 9000 calculate  
(i) Equilibrium level of national income  
(ii) Consumption expenditure at equilibrium level of national income



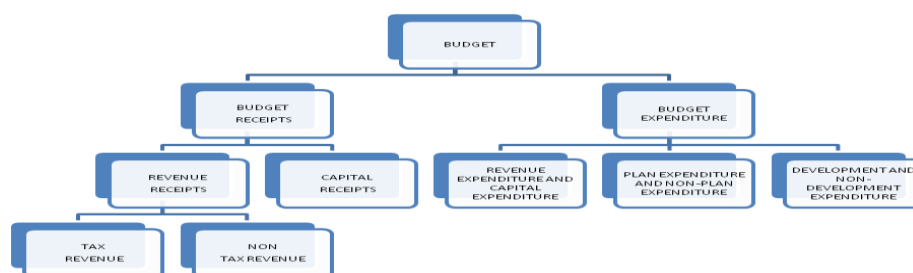
19. From the following information about an economy calculate (i) Equilibrium level of N.I  
(ii) saving at Equilibrium level of income consumption function  $C=200+0.9Y$  (where  $C$ =consumption expenditure and  $Y$ =N.I. Investment expenditure  $I=5000$ )
20.  $C=100+0.75Y$  is a consumption function (where  $C$ = consumption expenditure and  $Y$ = N.I) and investment expenditures  $=1600$  on the basis of this information calculate  
(i) Equilibrium level of national income  
(ii) Saving at Equilibrium level of NI.
21. Given below is the consumption function in an economy  $C=100+0.10Y$ . with the help of a numerical example show that in this economy as income increase APC will decrease.
22. Given below is the consumption function in an economy  $C=100 +0.5Y$  with the help of a numerical example show that in this economy as income increases APS will increase.
- 

#### **UNIT IX: GOVERNMENT BUDGET AND THE ECONOMY**

##### **KEY CONCEPTS:**

- Meaning of the Budget
- Objectives of the Budget
- Components of the Budget
- Budget Receipts
- Budget Expenditure
- Balanced, Surplus and Deficit Budgets
- Types of Deficits

## GOVERNMENT BUDGET – A FLOW CHART



### 1 MARK QUESTIONS AND ANSWERS

**1. Define a Budget.**

Ans: It is an annual statement of the estimated Receipts and Expenditures of the Government over the fiscal year which runs from April –I to March 31.

**2. Name the two broad divisions of the Budget.**

Ans: i) Revenue Budget  
ii) Capital Budget

**3. What are the two Budget Receipts?**

Ans: i) Revenue Receipts  
ii) Capital Receipts

**4. Name the two types of Revenue Receipts.**

Ans: i) Tax Revenue  
ii) Non-tax Revenue

**5. What are the two types of taxes?**

Ans: a) Direct Taxes: i) Income Tax, ii) Interest Tax, iii) Wealth Tax  
b) Indirect Taxes: i) Customs duties, ii) Excise duties, iii) Sales Tax

**6. What are the main items of Capital Receipts?**

Ans: a) Market Loans (loans raised by the government from the public)  
b) Borrowings by the Government  
c) Loans received from foreign governments and International financial Institutions.

**7. Give two examples of Developmental Expenditure.**

Ans: Plan expenditure of Railways and Posts

**8. Give two examples of Non-Developmental expenditures.**

Ans: i) Expenditure on defence  
ii) Interest payments

**9. Define Surplus Budget.**

Ans: A Surplus Budget is one where the estimated revenues are greater than the Estimated expenditures.

### 10. What are the four different concepts of Budget Deficits?

- Ans: a) Budget Deficit  
b) Revenue Deficit  
c) Primary Deficit and  
d) Fiscal Deficit

### **3 AND 4 MARK QUESTIONS AND ANSWERS**

#### 1. Explain the objectives of the Government Budget.

Ans: These below are the main objectives of the Government Budget.

- a) Activities to secure reallocation of resources: - The Government has to reallocate resources with social and economic considerations.
- b) Redistributive Activities: - The Government redistributes income and wealth to reduce inequalities.
- c) Stabilizing Activities: - The Government tries to prevent business fluctuations and maintain economic stability.
- d) Management of Public Enterprises: - Government undertakes commercial activities that are of the nature of natural Monopolies, heavy manufacturing etc., through its public enterprises.

#### 2. What are the components of the Budget?

Ans: These below are the main components of the Government Budget. They are---

- a) Budget Receipts
- b) Budget Expenditure

Budget receipts may be classified as:

- i) Revenue Receipts and
- ii) Capital Receipts

Revenue Receipts may be classified as:

- i) Tax Revenue and
- ii) Non-tax Revenue

Budget Expenditure may be classified as -----

- a) Revenue Expenditure and Capital Expenditure
- b) Plan Expenditure and Non-Plan Expenditure
- c) Developmental and Non-Developmental Expenditure

#### 3. Define Direct Taxes and Indirect taxes and give two examples each.

- i) Direct Tax: - These are those taxes levied immediately on the property and Income of persons, and those that are paid directly by the consumers to the state.

*Examples:* Income Tax, Wealth Tax, Corporation Tax etc.

- ii) Indirect Taxes: These are those taxes that affect the income and property of persons through their consumption expenditure. Indirect taxes are those taxes levied on one person but paid by another person.

*Examples:* Customs duties, excise duties, sales tax, service tax etc.

#### 4. What are the Non-Tax Revenue receipts?

Ans: These below are the Non-tax revenue receipts:

- a) Commercial Revenue: Examples-Payments for postage, toll, interest on funds borrowed from government credit corporations, electricity, Railway services.
- b) Interest and dividends
- c) Administrative revenue: Examples: Fees, fines, penalties etc.,

#### 5. What are the three major ways of Public Expenditure?

Ans: These below are the three ways of Public Expenditure----

- a) Revenue Expenditure and Capital Expenditure
- b) Plan Expenditure and Non-Plan Expenditure
- c) Development and Non-developmental Expenditure.

#### 6. What do you mean by Revenue Expenditure and Capital Expenditure?

Ans: i) Revenue Expenditure:- It is the expenditure incurred for the normal running of government departments and provision of various services like interest charges on debt, subsidies etc.,

ii) Capital Expenditure:- It consists mainly of expenditure on acquisition of assets like land, building, machinery, equipment etc., and loans and advances granted by the Central Government to States & Union Territories.

#### 7. Define Balanced, Surplus and Deficit Budgets.

Ans: a) Balanced Budget:- It is one where the estimated revenue EQUALS the estimated expenditure.

b) Surplus Budget:- It is one where the estimated revenue is GREATER THAN the estimated expenditures.

c) Deficit Budget:- It is one where the estimated revenue is LESS THAN the estimated expenditure.

#### 8. Explain the four different concepts of Budget deficit.

Ans: These are the four different concepts of Budget Deficit.

- a) Budget Deficit:- It is the difference between the total expenditure, current revenue and net internal and external capital receipts of the government.

Formulae:  $B.D = B.E - B.R$  (B.D= Budget Deficit, B.E. Budget Expenditure B.R= Budget Revenue)

- b) Fiscal Deficit:- It is the difference between the total expenditure of the government, the revenue receipts PLUS those capital receipts which finally accrue to the government.

Formulae:  $F.D = B.E - B.R$  (B.E > B.R. other than borrowings) F.D=Fiscal Deficit, B.E= Budget Expenditure, B.R. = Budget Receipts.

- c) Revenue Deficit: - It is the excess of governments revenue expenditures over revenue receipts.

Formulae:  $R.D = R.E - R.R$ , When  $R.E > R.R$ , R.D= Revenue Deficit, R.E= Revenue Expenditure, R.R. = Revenue Receipts.

- d) Primary Deficit: - It is the fiscal deficit MINUS Interest payments.

Formulae:  $P.D = F.D - I.P$ , P.D= Primary Deficit, F.D= Fiscal Deficit, I.P= Interest Payment.

## **06 MARK QUESTIONS AND ANSWERS**

1. How is tax revenue different from administrative revenue?

Ans:

a) Tax Revenue:-

i) It is the main source of revenue of the government

ii) It is the revenue that arises on account of taxes levied by the government.

iii) Taxes of two types i.e., Direct and Indirect.

iv) Direct taxes are those taxes levied immediately on the property and income of persons. Examples: Income Tax, Corporate Tax, Wealth Tax etc., Incidence and impact falls on same person.

v) Indirect taxes are those taxes levied on the production and sale of the goods. Examples: Sales Tax, Excise Duty etc. Tax paid by one person but burden taken by another person.

b) Administrative Revenue:-

i) It is the revenue that arises on account of the administrative function of the Government.

ii) It includes-

a) Fees

b) License fees

c) Fines and penalties

d) Forfeitures of surety by courts

e) Escheat – means claim of the government on the property of a person who dies without having any legal heirs.

2. What is a balanced government budget? Explain the multiplier effect of a balanced budget.

Ans:

a) Balanced Budget: - It is one where the estimated revenue of the government equals the estimated expenditure.

b) Effect of Multiplier on the Balanced Budget:-

i) If only source of revenue is a lump sum tax, a balanced budget will then mean that the amount of tax equals the amount of expenditure ( $T=E$ )

ii) A balanced budget has an expansionary effect on the economy.

iii) Under balanced budget, the increase in income is equal to the amount of government expenditure financed by tax revenue (i.e.,  $\Delta Y = \Delta G / \Delta T$ )

iv) The multiplier effect of a balanced budget is ONE (Unitary)

v) A balanced budget is a good policy to bring the economy, which is under employment to a full employment equilibrium.

### **HIGHER ORDER THINKING SKILLS (HOTS)**

1. What are the three levels at which the budget impacts the economy?

Ans: These below are the three levels at which the budget impacts the economy.

a) Aggregate fiscal discipline:- This means having control over expenditures, given the quantum of revenues. This is necessary for proper macro-economic performance.

- b) Allocation of resources: - The allocation of resources based on social priorities.
- c) Effective and efficient provision of programmes:- Effectiveness measures the extent to which goods and services the government provides its goals.

### **NUMERICALS**

1. The following figures are based on budget estimates of Government of India for the year 2001 – 2002. Calculate i) Fiscal Deficit ii) Revenue Deficit and iii) Primary deficit.

| ITEMS                                 | RS. BILLIONS |
|---------------------------------------|--------------|
| A) Revenue receipts                   | 2,31,745     |
| i) Tax Revenue                        | 1,63,031     |
| ii) Non-tax Revenue                   | 68,714       |
| B) Capital receipts                   | 1,43,478     |
| i) Recoveries of loans                | 15,164       |
| ii) Other receipts                    | 12,000       |
| iii) Borrowings and other liabilities | 1,16,314     |
| C) Revenue expenditure                | 3,10,566     |
| i) Interest payments                  | 1,12,300     |
| ii) Major subsidies                   | 27,845       |
| iii) Defence Expenditure              | 1,70,421     |
| D) Capital Expenditure                | 64,657       |
| E) Total Expenditure                  | 3,75,223     |
| i) Plan expenditure                   | 1,00,100     |
| ii) Non-plan expenditure              | 2,75,123     |

- i) Ans: Fiscal Deficit = Total expenditure – Revenue receipts – Non-debt capital receipts =  
 $3,75,223 - 2,31,745 - 15,164 - 12,000 = \text{Rs. } 1,16,314 \text{ billion.}$
- ii) Revenue Deficit = Revenue expenditure – Revenue receipts  
 $= 3,10,566 - 2,31,745 = \text{Rs. } 78,821 \text{ billion.}$
- iii) Primary deficit = Fiscal deficit – Interest payments  
 $= 1,16,314 - 1,12,300 = \text{Rs. } 4,014 \text{ billion.}$

2. From the following data about a government budget find

- a) Revenue Deficit b) Fiscal Deficit and c) Primary Deficit.

| S.No. | Items               | Rs. (cr.) |
|-------|---------------------|-----------|
| 01    | Tax revenue         | 47        |
| 02    | Capital receipts    | 34        |
| 03    | Non-tax revenue     | 10        |
| 04    | Borrowings          | 32        |
| 05    | Revenue expenditure | 80        |
| 06    | Interest payments   | 20        |

Ans: a) Revenue Deficit = Revenue expenditure – (Tax revenue + Non-tax revenue) =  
 $80 - (47 + 10) = 80 - 57 = 23 \text{ (cr.)}$   
 Fiscal Deficit = Borrowings = 32 (cr.)

Primary Deficit = Borrowings – Interest Payments 32 - 20 = 12 (cr.)

### **FREQUENTLY ASKED CBSE BOARD QUESTIONS**

1. Define full employment? (1)
2. What do you mean by Aggregate Demand? (1)
3. Write any two components of aggregate demand? (1)
4. Define Aggregate Supply? (1)
5. When APC is 0.6, what is the value of APS? (1)
6. If the rate of MPC is 0.75 find the value of multiplier? (1)
7. Define investment multiplier? (1)
8. What are the conditions for equilibrium level of income and employment? (1)
9. What is meant by excess demand? (1)
10. Define inflationary gap. (1)
11. Define deficient demand? (1)
12. Define underemployment equilibrium? (3)
13. What are the monetary measures to correct excess demand? (3)
14. State the fiscal measures to correct excess demand? (3)
15. Explain any two monetary and fiscal measures to correct deficient demand? (4)
16. Define investment multiplier. What is the relationship between MPC and multiplier? (4)
17. State the components of AD. Explain any one. (4)
18. Explain investment multiplier with the help of an example. (4)
19. Derive saving function from consumption function. (4)
20. State the Keynesian psychological law of consumption function. (4)

### **UNIT X: BALANCE OF PAYMENTS AND FOREIGN EXCHANGE RATE**

Foreign Exchange refers to all currencies other than the domestic currency of a given country.

Foreign exchange rate is the rate at which currency of one country can be exchanged for currency of another country.

Foreign Exchange Market: The Foreign Exchange market is the market where the national currencies are traded for one another.

Functions of Foreign Exchange Market:

1. Transfer function: It transfers the purchasing power between countries.
2. Credit function: It provides credit channels for foreign trade
3. Hedging function: It protects against foreign exchange risks.

**FIXED EXCHANGE RATE SYSTEM:** Fixed exchange rate is the rate which is officially fixed by the government, monetary authority and not determined by market forces.

**FLEXIBLE EXCHANGE RATE:** Flexible exchange rate is the rate which is determined by forces of supply and demand in the foreign exchange market.

DEMAND FOR AND SUPPLY OF FOR FOREIGN EXCHANGE

Demand for foreign exchange:

1. To purchase goods and services from other countries
2. To send gifts abroad
3. To purchase financial assets (shares and bonds)
4. To speculate on the value of foreign currencies
5. To undertake foreign tours
6. To invest directly in shops, factories, buildings
7. To make payments of international trade.

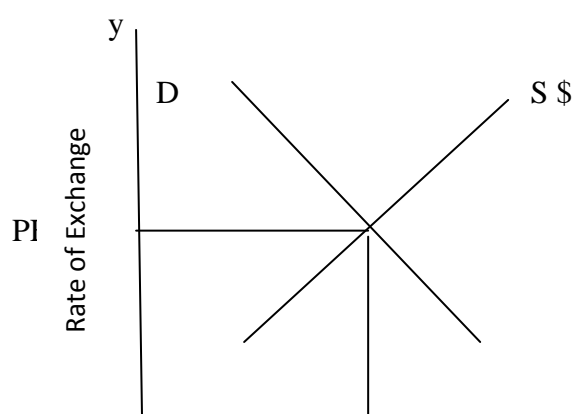
Supply of foreign exchange:

Foreign currencies flow into the domestic economy due to the following reason.

1. When foreigners purchase home countries goods and services through exports
2. When foreigners invest in bonds and equity shares of the home country.
3. Foreign currencies flow into the economy due to currency dealers and speculators.
4. When foreign tourists come to India
5. When Indian workers working abroad send their saving to families in India.

**EQUILIBRIUM IN THE FOREIGN EXCHANGE MARKET**

The equilibrium exchange rate is determined at a point where demand for and supply of foreign exchange are equal. Graphically interaction of demand and supply curve determines the equilibrium exchange rate of foreign currency.





D \$

$\frac{Q}{x}$

Demand and supply of US\$

Managed Floating: This is the combination of fixed and flexible exchange rate. Under this, country manipulates the exchange rate to adjust the deficit in the B.O.P by following certain guidelines issued by I.M.F.

Dirty floating: If the countries manipulate the exchange rate without following the guidelines issued by the I.M.F is called as dirty floating.

### **BALANCE OF PAYMENTS: MEANING AND COMPONENTS**

**Meaning:** The balance of payments of a country is a systematic record of all economic transactions between residents of a country and residents of foreign countries during a given period of time.

### **BALANCE OF TRADE AND BALANCE OF PAYMENTS**

Balance of trade: Balance of trade is the difference between the money value of exports and imports of material goods (visible item)

Balance of payments: Balance of payments is a systematic record of all economic transactions between residents of a country and the residents of foreign countries during a given period of time. It includes both visible and invisible items. Hence the balance of payments represents a better picture of a country's economic transactions with the rest of the world than the balance of trade.

### **STRUCTURE OF BALANCE OF PAYMENT ACCOUNTING**

A balance of payments statement is a summary of a Nation's total economic transaction undertaken on international account. There are two types of account.

1. **Current Account:** It records the following 03 items.

a) Visible items of trade: The balance of exports and imports of goods is called the balance of visible trade.

b) Invisible trade: The balance of exports and imports of services is called the balance of invisible trade E.g. Shipping insurance etc.

c) Unilateral transfers: Unilateral transfers are receipts which resident of a country receive (or) payments that the residents of a country make without getting anything in return e.g. gifts.

The net value of balances of visible trade and of invisible trade and of unilateral transfers is the balance on current account.

2. **CAPITAL ACCOUNT:** It records all international transactions that involve a resident of the domestic country changing his assets with a foreign resident or his liabilities to a foreign resident.

### **VARIOUS FORMS OF CAPITAL ACCOUNT TRANSACTIONS**

1. **Private transactions:** These are transactions that are affecting assets (or) liabilities by individuals.
2. **Official transactions:** Transactions affecting assets and liabilities by the government and its agencies.
3. **Direct Investment:** It is the act of purchasing an asset and at the same time acquiring and control of it.
4. **Portfolio investment:** It is the acquisition of assets that does not give the particular control over the asset.  
The net value of balances of direct and portfolio investment is called the balance on capital account.

### **OTHER ITEMS IN THE BALANCE OF PAYMENT**

They are included since the full balance of payments account must balance. These items are as follows.

- 1) **Errors and Omissions:** They may arise due to the presence of sampling and due to his honesty.
- 2) **Official reserve transactions:** All transactions except those in this category may be termed as autonomous transactions. They are so called because they were entered into with some independent motive. Balance of payments always balance.

### **AUTONOMOUS AND ACCOMMODATING ITEMS**

**Autonomous items:** Autonomous items in the B.O.P refer to international economic transactions that take place due to some economic motive such as profit maximization. These items are often called above the line items in the B.O.P.

The balance of payments is in a deficit if the autonomous receipts are less than autonomous payments. The monetary authorities may finance a deficit by depleting their reserves of foreign currencies, or by borrowing from I.M.F.

**Accommodating items:** Accommodating items in the B.O.P. refer to transactions that occur because of other activity with the B.O.P such as government financing. Accommodating items are also referred to as below the line of items.

### **DISEQUILIBRIUM THE BALANCE OF PAYMENTS**

There are a number of factors that cause disequilibrium in the balance of payments showing either a surplus or deficit. These causes are categorized into 3 factors.

I **Economic factors:** Large scale development expenditure that may cause large imports.

Cyclical fluctuations in general business activities such as recession or depression.

High domestic prices may result in imports.

**II Political factors:** Political instability may cause large capital outflows and hamper the inflows of foreign capital.

**III Social factors:** Changes in tastes, preferences and fashions may affect imports and exports.

### **VERY SHORT ANSWER QUESTIONS.**

**1. Define foreign exchange rate.**

Ans: Foreign exchange rate is the rate at which currency of one country can be exchanged for currency of another country.

**2. What do you mean by Foreign Exchange Market?**

Ans: The foreign exchange market is the market where international currencies are traded for one another.

**3. What is meant by Fixed Exchange Rate?**

Ans: Fixed Rate of exchange is a rate that is fixed and determined by the government of a country and only the government can change it.

**4. What is equilibrium rate of exchange?**

Ans: Equilibrium exchange rate occurs when supply of and demand for foreign exchange are equal to each other.

**5. Define flexible exchange rate.**

Ans: Flexible rate of exchange is that rate which is determined by the demand and supply of different currencies in the foreign exchange market.

**6. What is meant by appreciation of currencies?**

Ans: Appreciation of a currency occurs when its exchange value in relation to currencies of other country increases.

**7. Define Spot exchange rate.**

Ans: The spot exchange rate refers to the rate at which foreign currencies are available on the spot.

**8. Define forward market.**

Ans: Market for foreign exchange for future delivery is known as the forward market.

**9. What is meant by balance of payments?**

Ans: Balance of payments refers to the statement of accounts recording all economic transactions of a given country with the rest of the world.

**10. What do you mean by balance of trade?**

Ans: Balance of trade is the difference between the value of imports and exports of only physical goods.

**11. The balance of trade shows a deficit of Rs. 600 crores, the value of exports is Rs.1000 crores. What is value of Imports?**

Ans: Balance of Trade = Exports of goods – import of goods

Import of good = Export of goods – (B.O.T)

= 1000- (-600)

= Rs. 1600.

**12. What is the balance of visible items in the balance of payments account called?**

Ans:- Balance of trade

**13. What do you mean by disequilibrium in BOP?**

Ans:- Disequilibrium in BOP is means either there is a surplus or deficit in balance of payment account.

**14. List two items of the capital account of BOP account.**

Ans:- i) external assistance    ii) commercial borrowing    iii) foreign investment

**15. Which transactions bring balance in the BOP account?**

Ans:- Accommodating transactions bring balance in the BOP account.

**16. Define autonomous items in BOP.**

Ans:- Autonomous items in BOP refers to international economic transaction that take place due to some economic motive such as profit maximization. These items are independent of the state of the country balance of payments.

**17. What is the other name of autonomous items in the BOP?**

Ans:- The other name of autonomous items in BOP is above the line item.

**18. When does a situation of deficit in BOP arises?**

Ans:- A situation of deficit in BOP arise when autonomous receipts are less than autonomous payments.

**19. What is meant by managed floating?**

Ans:- It is a system that allows adjustments in exchange rate according to a set of rules and regulations which are officially declared in the foreign exchange market.

**20. What is meant by dirty floating?**

Ans:- Manipulate the exchange rate without following the guidelines issued by IMF is called dirty floating.

### **ANSWER QUESTIONS (3 / 4 MARKS)**

**1. Why is foreign exchange demanded?**

Ans:- Foreign exchange is demanded for the following purposes.

- a) Payment of International loans
- b) Gifts and grants to rest of the world
- c) Investment in rest of the world.
- d) Direct purchases abroad for goods and services as well as imports from rest of the world.

**2. What determines the flow of foreign exchange in to the country?**

Ans: - Following factors contribute to the flow of foreign exchange in to the country.

- a) Purchases of domestic goods by the foreigners
- b) Direct foreign investment and portfolio investment in the home country.
- c) Speculative purchase of foreign exchange.
- d) When foreign tourists come to India.

**3. Why does the demand for foreign exchange rise, when it price falls?**

Ans:- With a fall in price of foreign exchange , the exchange value of domestic currency increases and that of foreign currency falls. This implies that foreign goods become cheaper and their domestic demand increases. The rising domestic demand for foreign goods implies higher demand for foreign exchange. So there is inverse relationship between price and demand for foreign exchange.

**4. When price of a foreign currency falls, the supply of that foreign currency also fall why?**

Ans: When price of a foreign currency falls it makes exports, investment by foreign residents costlier as a result supply of foreign currency falls.

**5. Distinguish between autonomous and accommodating transaction of balance of payment account.**

Ans: Autonomous transactions are done for some economic consideration such as profit, such transactions are independent of the state of B.O.P. Accommodating transactions are under taken to cover the deficit/surplus in balance of payments.

**Give two examples explain why there is a rise in demand for a foreign currency when its price falls.**

Ans: When price of foreign currency falls, imports are cheaper. So, more demand for foreign exchange by importers.

Tourism abroad is promoted as it becomes cheaper. So demand for foreign currency rises.

**Distinguish between fixed and flexible foreign exchange rate.**

Ans: When foreign exchange rate is fixed by Central Bank/government, it is called fixed exchange rate. When foreign exchange rate is determined by market forces/mechanism, it is flexible exchange rate.

| Sl. | Forms of  | Very Short (1    | Short Answer  | Long  | Total |
|-----|-----------|------------------|---------------|-------|-------|
| 1   | Unit 1    | 1(1)             | 3(1)          | --    | 4     |
| 2   | Unit 2    | 1(2)             | 3(2), 4(1)    | 6(1)  | 18    |
| 3   | Unit 3    | 3(1)             | 3(1), 4(2)    | 6(1)  | 18    |
| 4   | Unit 4    | 1(1)             | 3(1)          | 6(1)  | 10    |
| 5   | Unit 5    | Not to be tested |               |       |       |
| 6   | Unit 6    | --               | 3(3)          | 6(1)  | 15    |
| 7   | Unit 7    | 1(2)             | --            | 6(1)  | 08    |
| 8   | Unit 8    | 1(2)             | 4(1)          | 6(1)  | 12    |
| 9   | Unit 9    | --               | 4(2)          | --    | 08    |
| 10  | Unit 10   | 1(1)             | 3(2)          | --    | 07    |
|     | Sub Total | 10(10)           | 30(10), 24(6) | 36(6) | 100   |

**Sample Question Paper -1****BLUE PRINT****ECONOMICS - Class XII****Weightage by Type of Question**

| Type         | No. of Questions | Marks | Total | Estimated Time a candidate is expected to take |
|--------------|------------------|-------|-------|--|
| Long Answer  | 6                | 6     | 36    | 60 Minutes                                     |
| Short Answer | 6                | 4     | 24    | 36 Minutes                                     |
| Short Answer | 10               | 3     | 30    | 50 Minutes                                     |
| Very Short   | 10               | 1     | 10    | 15 Minutes                                     |

**Difficulty Level of the Question Paper**

| Level     | Marks | %age of the Total |
|-----------|-------|-------------------|
| Easy      | 30    | 30                |
| Average   | 50    | 50                |
| Difficult | 20    | 20                |

## Sample Question Paper -1

### ECONOMICS - Class XII

**Maximum Marks: 100**

**Time : 3 Hour**

**General instructions:-**

1. Q. No. 1 to Q. No. 5 & 17 TO 21 are very short answer type carrying 1 mark each. Answer these questions in one sentence only.
2. Q.No. 6 to 10 & Q.No. 22 to 26 are short answer type carrying 3 marks each. Answer to them should not normally exceed 60 words each.
3. Q.No. 11 to 13 & Q.No. 27 to 29 are short answer type carrying 4 marks each. Answer to them should not normally exceed 70 words each.
4. Q No. 14 to 16 & Q. No. 30 to 32 are long answer type carrying 6 marks each. Answer to them should not normally exceed 100 words each.
5. There is no words limitation for numerical questions

- 
1. What happens to total utility when marginal utility is negative? (1)
  2. Why is the PPC concave to origin? (1)
  3. How many firms are there in Monopoly Market? (1)
  4. When demand for a good rise due to rise in price of substitute goods?  
What is such a change in demand called? (1)
  5. What is meant by Fixed Cost? (1)
  6. A lot of people died and many factories are destroyed because of a  
severe earthquake in a country. How will it affect the country's PPC. (3)
  7. Why does budget line slope downwards from left to right? (3)
  8. Explain the effects of change in income of the buyers of a good on its demand. (3)

OR

- Explain any three determinants of demand for a commodity for a household.
9. Explain the effect of "Change in Prices of inputs used" on the supply of  
a product. (3)
  10. Define Perfect competition. State its any two features. (3)
  11. A consumer buys 80 units of a good at a price of Rs. 5/- per unit.  
Suppose price elasticity of demand is (-)2. At what price will he buy 64 units? (4)
  12. Define Producer's Equilibrium. Explain producer's Equilibrium with  
Marginal Revenue (MR) and Marginal cost (MC) approach under  
perfect competition. (4)

Or

- Explain in case of perfect competition, determination of producer's equilibrium using TC and TR approach.
13. Calculate total variable cost and marginal cost at each given level of output  
from the following table- (4)

|        |    |    |    |    |     |
|--------|----|----|----|----|-----|
| Output | 0  | 1  | 2  | 3  | 4   |
| Total  | 40 | 60 | 78 | 97 | 124 |

14. When will the equilibrium price of a commodity not change if its demand and supply both increase? Explain through a diagram. (6)

OR

There is a simultaneous 'decrease' in demand and supply of a commodity.

When it will result in :No change in equilibrium Price. A fall in equilibrium price.

15. Explain the meaning of increasing returns to a factor with the help of TPP schedule and TPP curve. (6)
16. Explain different situation under which budget line shifts. Use diagram. (6)

### **SECTION B (MACRO ECONOMICS)**

17. Give the meaning of ex-ante aggregate demand. 1
18. State the relationship between MPC and investment multiplier. 1
19. The price of 1 us dollar has fallen From Rs. 50 to Rs 48. Has the Indian currency appreciated or depreciated? 1
20. State the two components of money supply. 1
21. Name the primary function of money. 1
22. From the following data relating to a firm, calculates its net Value Added at factor cost: 3

(Rs. In Lacs)

|  |      |
|--|------|
| (i) Sales                              | 1600 |
| (ii) Subsidy                           | 80   |
| (iii) Closing stock                    | 40   |
| (iv) Depreciation                      | 60   |
| (v) Intermediate purchase              | 1000 |
| (vi) Import of raw material            | 120  |
| (vii) Exports                          | 200  |
| (viii) Opening stock                   | 100  |
| (ix) Purchase of machinery for own use | 400  |

23. Distinguish between Domestic and National product. When can National product be more than Domestic product? 3
24. 'Machine' purchased is always a final good.' Do you agree ? Give reasons for your answer. 3
25. Give three reasons why people desire to have foreign exchange. 3

OR

Explain the effect of Appreciation of domestic currency on Imports.

26. Distinguish between the current account and capital account of balance of payments account. Is import of machinery recorded in current account or capital account? Give reasons for your answer. 3
27. Categories the following government receipts into revenue and capital receipts. Give reasons for your answer. 4
- (a) Receipts from sale of share of a public sector undertaking.
- (b) Borrowings from public.
- (c) Profits of public sector undertakings.
- (d) Income tax received by government.



28. Explain the meaning of equilibrium level of income and output using savings and investment approach. Use a diagram.

4

OR

Complete the following table-

| Income | Marginal Propensity to Consume | Saving | Average Propensity to Consume |
|--------|--------------------------------|--------|-------------------------------|
| 0      | --                             | -40    | --                            |
| 100    | --                             | -20    | --                            |
| 200    | --                             | 0      | --                            |
| 300    | --                             | 60     | --                            |
| 400    | --                             | 120    | --                            |

29. What is the government budget? Give the meaning of :

4

- (i) Revenue deficit,
- (ii) Fiscal deficit,
- (iii) Primary deficit.

30. In an economy  $S = -100 + 0.5Y$  is the saving function. (Where S=saving and Y=national Income) and investment expenditure is Rs. 7000. Calculate :

6

- (i) Equilibrium level of national income
- (ii) Consumption expenditure at equilibrium level of national income.

31. Explain the process of money creation by commercial banks.

6

32. From the following data calculate National Income by expenditure and Income method :

6

(Rs in crores)

- (i) Government final consumption expenditure 300
- (ii) Subsidies 30
- (iii) Rent 600
- (iv) Wages and salaries 1800
- (v) Indirect Tax 180
- (vi) Private final consumption expenditure 2400
- (vii) Gross domestic capital formation 360
- (viii) Social security contribution by employers 165
- (ix) Royalty 75
- (x) Net factor income paid to abroad 90
- (xi) Interest 60
- (xii) Consumption of fixed capital 30
- (xiii) Profit 390
- (xiv) Net exports 210
- (xv) Change in stock 150

OR

Calculate Personal Income and Gross National Disposable Income from the given data :

(Rs in crores)

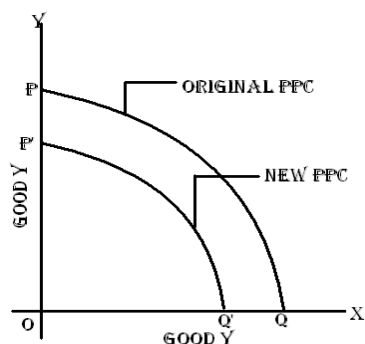
- (i) Personal Tax 240
- (ii) Net indirect tax 200
- (iii) Corporation tax 180

|        |   |       |
|--------|---|-------|
| (iv)   | National income                               | 2000  |
| (v)    | Net factor income abroad                      | 10    |
| (vi)   | Consumption of fixed capital                  | 100   |
| (vii)  | National debt interest                        | 140   |
| (viii) | Retained earnings of private corporate sector | 80    |
| (ix)   | Net current transfers to the rest of world    | (-)40 |
| (x)    | Current transfers from government             | 60    |
| (xi)   | Current transfer from government              | 60    |
| (xii)  | Share of government in National income        | 160   |

### **MARKING SCHEME FOR MODEL QUESTION PAPER**

#### **SECTION A**

1. Total utility should be falling. 1
2. Because of increased marginal opportunity cost. 1
3. One 1
4. Increase in demand. 1
5. Costs, which incurred on fixed factor. 1
6. With the death of lot of people amount of labour will fall and destruction of factories will cause a reduction in the stock of capital. This decrease in resources causes of shift of production possibility curve to the left showing less production of two goods than before. 1.1/2\*2=3



7. Because with given income and given prices of two goods, if a consumer buys more of one good he has to buy less of the other good. 3
8. Normal goods – Increase in the income of consumer increases his demand. 1
- Inferior goods- Negative relationship between income and demand. 1
- Necessities of life- demand is unaffected. 1

OR

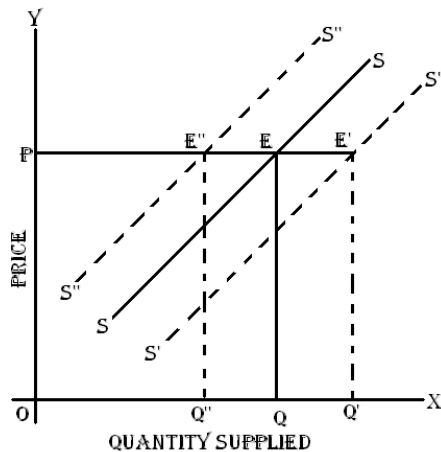
Following are the factors that affecting demand for a commodity by a consumer.

- (1) Price of the commodity 1
- (2) Income of the consumer 1
- (3) Price of Related goods (Substitute and Complementary goods) 1

9. Supply curve shifts rightward and leftward due to increase or decrease in price of the inputs.

Diagram

3



10. Perfect competition- It refers to a market situation in which there are large number of buyers and sellers selling homogeneous product.

1

Features- (any two)

1\*2=2

(1) Very Large number of buyers and sellers.

(2) Homogeneous Product

(3) Free entry and exit of firms

(4) Perfect knowledge about market

(5) No Transport Cost.

11.  $e_p = \frac{\Delta Q}{\Delta P} \times \frac{P}{Q}$

$(- )2 = \frac{16}{\Delta P} \times \frac{5}{80}$

1

$2 = \frac{1}{\Delta P}$

1

$\Delta P = \frac{1}{2}$

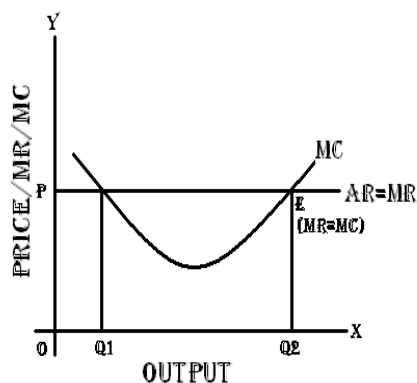
$\Delta P = 0.5$

1

New price –  $P + \Delta P = 5 + 0.5 = \text{Rs } 5.5 \text{ per unit.}$

1

12. PRODUCER'S EQUILIBRIUM-A producer's said to be in equilibrium when he produces the level of output at which his profit is maximum. 3+1=4



Under perfect competition, price =MR=AR which is parallel to X axis. Two conditions must be satisfied to achieve producer's equilibrium.

- (1)  $MR=MC$ , (2) MC cuts MR from below

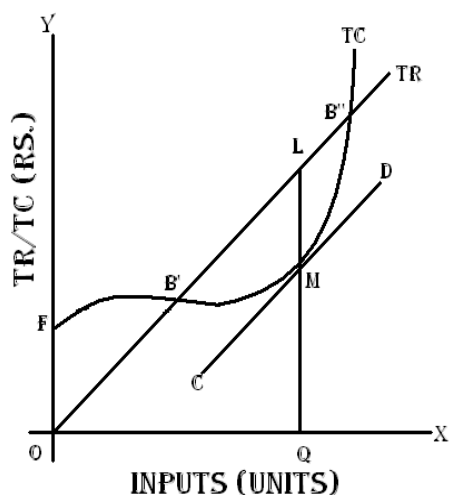
In the diagram  $OQ_2$  is the equilibrium level of output because it satisfies both the conditions of equilibrium that is  $MR=MC$  and MC cuts MR from below.

- (2). MC should be greater than MR after equilibrium output.

If the firm produces less than  $OQ_2$  then profit are not maximize. On the other hand, if firm produces more than  $OQ_2$  then there will be a loss and total profits will be reduced.

OR

Under perfect competition, TR increases at constant rate as  $AR=MR$  and both AR, MR are constant as a firm is a price taker. Therefore, TR curve is a straight line from the origin. TC curve starts from F indicating of are a fixed cost. Line CD is tangent to TC curve such that it is parallel to TR curve. LM is the maximum vertical distance between TR and TC curves. Therefore, at OQ units of output firm earns maximum profit. Thus OQ is the firm's equilibrium level of output (Note : At point B' and B'', firm's  $TR=TC$  which therefore called as a Break-even point).

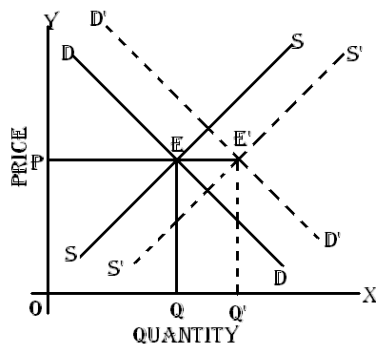


13.

2+2=4

| Output | Total Cost | TFC | TVC | MC |
|--------|------------|-----|-----|----|
| 0      | 40         | 40  | 0   | 0  |
| 1      | 60         | 40  | 20  | 20 |
| 2      | 78         | 40  | 38  | 18 |
| 3      | 97         | 40  | 57  | 19 |
| 4      | 124        | 40  | 84  | 27 |

14. When both demand and supply of a commodity increase (when both demand and supply curve of a commodity shift to the right), the equilibrium quantity will increase but the equilibrium price may or may not be affected. This can be shown by diagram.



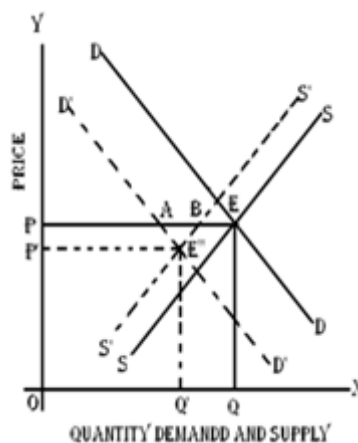
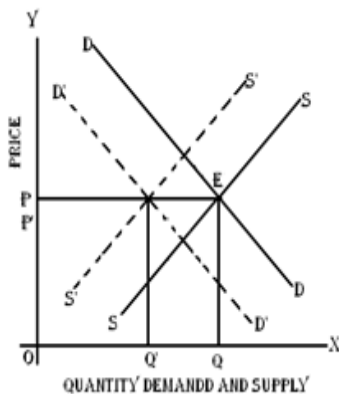
When both demand and supply of a commodity increase in equal proportion, the equilibrium price will remain the same. As shown in the diagram after change in both demand and supply price will remain the same as P and the equilibrium quantity changed from Q to Q'.

3+3=6

OR

Decrease means less quantity at the same price. Decrease in demand shift the demand curve to the left downwards. Decrease in supply shifts the supply curve to the left upwards.

- (i) If decrease in demand is equal to decrease in supply, there will be no change in the equilibrium price. In the figure, both demand and supply decrease by  $E'E = Q'Q$  at a given price OP

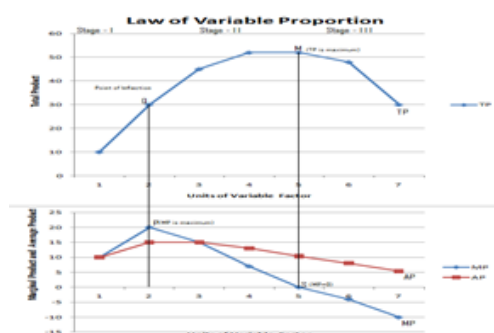


(ii) If decrease in demand is greater than decrease in supply, the equilibrium price will fall. In the figure, decrease in DD=AE. While decrease in supply is lower i.e. BE''. Therefore, equilibrium price falls from OP to OP'.

- 15 law of variable proportions – The law of variable proportion states that if we go on using more and more units of a variable factor (Labour) with a fixed factor (land), the total physical product increases at an increasing rate in the beginning, then increases at a decreasing rate after a level of output and ultimately it falls. In accordance with the law, the Marginal Physical Product increases in the beginning, then it starts falling but remains positive and ultimately it continues to fall but also becomes negative. The following schedule and diagram illustrate the law.

Schedule and Diagram-

| Fixed | Variable | Total | Marginal | Average | Stages                                      |
|-------|----------|-------|----------|---------|---|
| 1     | 1        | 10    | 10       | 10      | First Stage (Increasing Returns to Factor)  |
| 1     | 2        | 30    | 20       | 15      |   |
| 1     | 3        | 45    | 15       | 13      |   |
| 1     | 4        | 52    | 7        | 13      | Second Stage (Decreasing Returns to factor) |
| 1     | 5        | 52    | 0        | 10.4    |   |
| 1     | 6        | 48    | -4       | 8       | Third Stage (Negative Returns to a Factor)  |
| 1     | 7        | 38    | -10      | 5.4     |   |



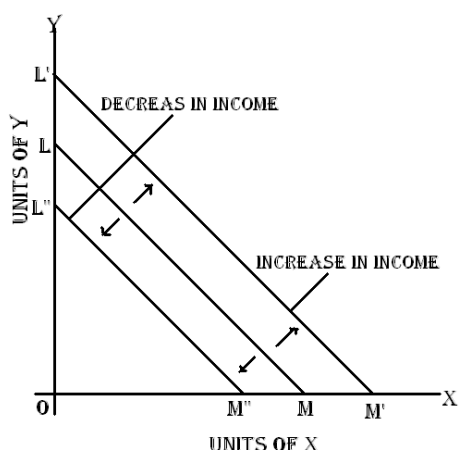
The schedule and the diagram show that there are three phases of the law of variable proportions. In the First phase, TPP increases at an increasing rate and MPP rises. In phase II, TPP increases at a diminishing rate and MPP falls but remains positive. In phase III, TPP starts falling and MPP becomes negative. Phase I is up to unit 2 and phase II is from unit 2 to unit 5. Phase III is after unit 5.

$$2+2+2=6$$

# 1. Shifts In Budget Line.

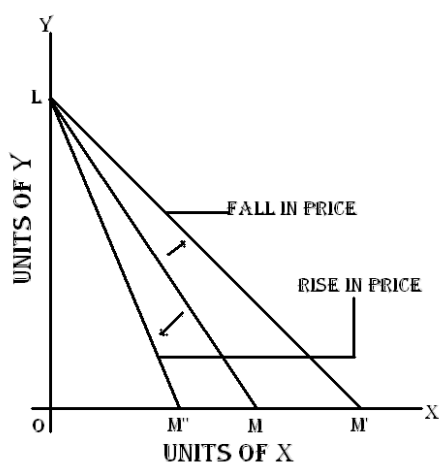
Case I – When consumer's money income increases but price of commodities remain constant.

3



If LM is the Budget Line. Suppose if money income is increases then consumer will be able to purchase more goods with the new income at the given prices, therefore budget line will shift to the right (L'M'). Suppose if money income is decreases then consumer will be able to purchase less goods with the new income at the given prices, therefore budget line will shift to the left (L''M''). New budget line L'M' and L''M'' is parallel to the original budget line LM because slope of new budget lines remain same since price do not change.

Case II – When prices of good X change and income of consumer's remain constant. 3



If LM is the Budget Line. Suppose if price of good X falls but money income and price of Y good remain constant then consumer will be able to purchase more of good X only, therefore budget line will shift to the right (L'M'). Suppose if price of good X rises but money income and price of Y good remain constant then consumer will be able to purchase less of good X only, therefore budget line will shift to the left (L''M'').

## **SECTION B**

17. Ex-ante aggregate demand refers to the anticipated total demand for goods and services in an economy during a given period of time. 1
18. Multiplier (K) =  $1/1-mpc$  1
19. Indian currency has appreciated. 1
20. The two components of money supply are : Currency held with the public and demand deposits with commercial banks. 1
21. Money as the measure of Value And Money as a medium of exchange. 1

22.  $NVA_{fc} = 1600 + 40 - 100 - 1000 - 60 + 80$   
 $= \text{Rs}560 \text{ lakhs}$  3
23. Domestic Product refers to the output produced by all production units located within the domestic territory of a country during an accounting period. 1
- National product refers to the output produced by normal resident of a country (within and outside the country) during an accounting year. 1
- When Net Factor Income from Abroad is positive then National product can be more than Domestic product 1
24. Whether machine is a final good or not depends on how it is being used .
- If the machine is bought by a household, then it is a final good. 1
- If the machine is bought by a firm for its own use, then also it is a final good. 1
- If the machine is bought by a firm for resale then it is an intermediate good. 1
25. Three reasons. (1x3 = 3)
- (1) To purchase goods and services from other countries by the domestic residents.
- (2) To send gifts and grants to foreign countries.
- (3) To invest and purchase financial assets in some other country
- OR
- Appreciation of domestic currency means a rise in the price of domestic currency (say rupee) in terms of a foreign currency (say \$). It means one rupee can be exchanged for more \$. So with the same amount of money more goods can be purchased from USA. It means imports from USA have become cheaper. They may result in increase of imports (from USA). 3
26. The current account records transactions relating to the export and import of goods and services, income and transfer receipts and payments during a year. 1
- The capital accounts records transactions affecting foreign assets and foreign liabilities during a year. 1
- Since import of machinery is an import of good, it is recorded in the current account. 1
27. (a) It is a capital receipt as it results in reduction of assets. 1
- (b) It is a capital receipt as it creates a liability. 1
- (c) It is a revenue receipt as it neither creates a liability nor reduces any assets. 1
- (d) It is a revenue receipt as it neither creates a liability nor reduces any assets. 1
28. AC is the consumption curve and OA is the consumption expenditure at zero level of income. Income minus consumption is saving. When income is zero, the economy's consumption level is OA. Thus, the corresponding level of saving is -OA. So A is the starting point of saving curve.



At OB level of income consumption is equal to income, so saving are zero. So B is another point of saving curve. Join A and B and extend this line to S, AS is the saving curve.

1

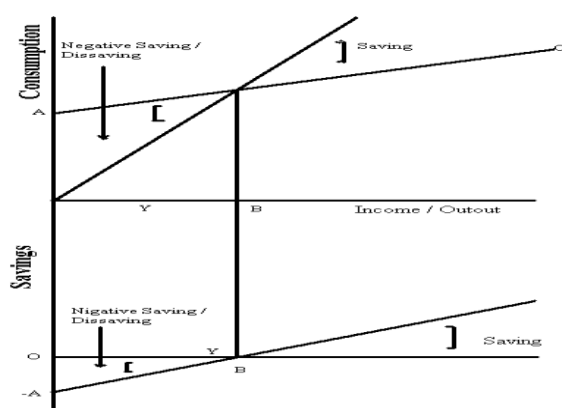
(a) The level of income at which APC is equal to one is OB.

1/2

(b) A level of income at which APS is negative is OY.

1/2

2



OR

| Income | $\Delta Y$ | Saving | Consumption | $\Delta C$ | MPC | APC |
|--------|------------|--------|-------------|------------|-----|-----|
| 0      | --         | -40    | 40          | --         | --  | --  |
| 100    | 100        | -20    | 120         | 80         | 0.8 | 1.2 |
| 200    | 100        | 0      | 200         | 80         | 0.8 | 1.0 |
| 300    | 100        | 60     | 240         | 40         | 0.4 | 0.8 |
| 400    | 100        | 120    | 280         | 40         | 0.4 | 0.7 |

29. Government Budget is a statement of expected receipt and expenditure of the government during a financial year.

1

(a) Revenue deficit is the excess of revenue expenditure over revenue receipts.

1

(b) Fiscal deficit is the excess of total expenditure over total receipts excluding borrowings.

1

(c) Primary deficit refers to the difference between fiscal deficit of the current year and interest payments on the previous borrowings.

1

30. Saving Function  $S = -100 + 0.5 Y$

Consumption Function  $C = Y - S$

$$C = Y + 100 - 0.5 Y$$

$$C = 100 + 0.5 Y$$

Investment  $I = 7000$

- (a) Equilibrium Level of National Income 3

$$Y = AD = C + I$$

$$Y = 100 + 0.5 Y + 7000$$

$$0.5 Y = 7100$$

$$Y = 7100 / 0.5 = \text{Rs. } 14200$$

- (b) Consumption expenditure at equilibrium level of national income 3

$$C = Y + 100 - 0.5 Y$$

$$Y = 14200 = 100 + 0.5 (14200)$$

$$= 7200$$

31. Money creation or deposit creation or credit creation by the bank is determined by (1) the amount of the initial fresh deposits and (2) the Legal Reserve Ratio (LRR), the minimum ratio of deposit legally required to be kept as cash by banks. It is assumed that all the money that goes out of bank is redeposited in to the banks.

Let the LRR be 20% and there is a fresh deposit of Rs. 10000. As required, the banks keep 20% i.e. Rs. 2000 as cash. Suppose the bank lend the remaining Rs. 8000. Those who borrow use this money for making payments. As assumed who receive payments put the money back in to the bank. In this way bank receive fresh deposit of Rs. 8000.

The bank again keep the 20% i.e. Rs. 1600 as cash and lend Rs. 6400, which is also 80% of the last deposit. The money again comes back to the banks leading to a fresh deposit of Rs. 6400. The money goes on in multiplying in this way, and ultimately total money creation is Rs. 50000.

### 33. Expenditure Method

|                 |   |                                       |       |
|-----------------|---|---------------------------------------|-------|
| National Income | = | vi + i + vii + xiv - v + ii - xii - x | 1     |
|                 | = | 2400+300+360+210-180+30-30-90         | 1.1/2 |
|                 | = | Rs. 3000 Crores.                      | 1/2   |

### Income Method

|                 |   |  |       |
|-----------------|---|--|-------|
| National Income | = | iv + viii + (iii + ix) + xi + xiii - x | 1     |
|                 | = | 1800+165+(600+75)+60+390-90            | 1.1/2 |
|                 | = | Rs. 3,000 Crores.                      | 1/2   |

OR

|                        |   |  |       |
|------------------------|---|--|-------|
| <u>Personal Income</u> | = | (iv - xi) + (vii - ix - x) - viii - iii  | 1     |
|                        | = | 2000 - 160 + 140 - (-40) + 60 - 80 - 180 | 1.1/2 |
|                        | = | Rs. 1820 Crores.                         | 1/2   |

|             |   |                          |       |
|-------------|---|--------------------------|-------|
| <u>GNDI</u> | = | iv + ii + vi – ix        | 1     |
|             | = | 2000 + 200 + 100 - (-40) | 1.1/2 |
|             | = | Rs. 2340 Crores.         | 1/2   |

## Sample Question Paper – 2

CLASS-XII

SUB-ECONOMICS

Time : 3 Hrs

Max. Marks - 100

General instructions:

- Q. No. 1 to Q. No. 5 & 17 TO 21 are very short answer type carrying 1 mark each. Answer these questions in one sentence only.
- Q.No. 6 to 10 & Q.No. 22 to 26 are short answer type carrying 3 marks each. Answer to them should not normally exceed 60 words each.
- Q.No. 11 to 13 & Q.No. 27 to 29 are short answer type carrying 4 marks each. Answer to them should not normally exceed 70 words each.
- Q No. 14 to 16 & Q. No. 30 to 32 are long answer type carrying 6 marks each. Answer to them should not normally exceed 100 words each.
- There is no words limitation for numerical questions.

### Section -A

- What is law of demand?
- State one feature of oligopoly
- In which market form demand curve of a firm is perfectly elastic.
- Why is demand for water inelastic?
- Name the characteristic which make monopolistic competition different from perfect competition.
- Explain any three factors that affect elasticity of demand.
- Given below is the cost schedule of a firm. Its average fixed cost is Rs20 when it produced 3 units.

| Output(units)              | 1  | 2  | 3  |
|----------------------------|----|----|----|
| Average variable cost (Rs) | 30 | 28 | 32 |

Calculate its marginal cost and average cost at each given level of output.

- Total revenue at the price of Rs 4 per unit of a commodity is Rs 480. Total revenue increases by Rs 240 when its price rises by 25 percent. Calculate its price elasticity of supply.

OR

Differentiate between Change in Quantity supplied and Change in supply.

- Explain the implication of 'homogenous product' feature of perfect competition.

10. State & explain the law of diminishing marginal utility with the help of utility schedule.
11. Explain the effect of increase the income of buyer of a normal commodity on its equilibrium price.

OR

Why does the demand curve slopes downward?

12. Explain the problem of what to produce.
13. When the price of the commodity falls by Rs. 2 per unit, its quantity demanded increases by 10 units. Its price elasticity of demand is ( - )1. Calculate its quantity demanded at the price before change which was Rs 10 per unit.
14. Explain the concept of consumer equilibrium when a consumer purchases two commodities. (IC Approach)

OR

Define Indifference Curve. Explain any two features of indifference Curve.

15. Explain the law of variable proportion with the help of total product and marginal product curve.
16. State whether the following statement are true or false. Give reason for your answer.
  - (a) When total revenue is constant average revenue will also be constant.
  - (b) Average variable cost can fall even when marginal cost is rising.
  - (c) When marginal product falls average product will also fall.

### **Section –B**

17. State two sources of supply of foreign exchange.
18. Give the meaning of aggregate demand.
19. State the meaning of money supply.
20. How is the primary deficit calculated?
21. Give the meaning of deflationary gap.
22. How can Government budget be helpful in altering distribution of income in an economy? Explain.
23. Explain the 'currency authority' function of central bank.
24. Explain how distribution of gross domestic product has its limitation as a measure of economic welfare.
25. Distinguish between autonomous and accommodating transaction of balance of payment account.

OR

What are causes for disequilibrium of balance of payments?

26. Giving any two examples explain the relation between the rise in price of foreign currency and its demand.
27. Distinguish between:
  - (a) Capital receipts and revenue receipts.
  - (b) Direct tax and indirect tax.
28. Giving reason, state whether the following statement true or false:
  - (a) Average propensity to save is always greater than zero
  - (b) Value of investment multiplier varies between zero and infinity.

29. Explain the process of money creation by Commercial Banks.

OR

Explain briefly measures of money supply in India.

30. In an economy 75 percent of the increase in income is spent on consumption.

Investment is increased by Rs 1,000 crores. Calculate:

(a) Total increase in income

(b) Total increase in consumption expenditure.

31. How will you treat the following while estimating national income of India?

(a) Dividend received by an Indian from his investment in share of a foreign company.

(b) Money received by a family in India from relative working abroad.

(c) Interest received on loan given to a friend for purchasing a car.

32. From the following data calculate (a) GDP at factor cost and (b) factor income to abroad:

| ITEMS                                 | Rs. In crore) |
|---------------------------------------|---------------|
| (I) compensation of employees         | 800           |
| (II) profit                           | 200           |
| (III) dividend                        | 50            |
| (IV) GNP at market price              | 1400          |
| (IV) rent                             | 50            |
| (V) interest                          | 100           |
| (VI) gross domestic capital formation | 300           |
| (VII) net fixed capital formation     | 200           |
| (IX) change in stock                  | 50            |
| (X) factor income from abroad         | 60            |
| (XI) net indirect taxes               | 120           |

OR

Distinguish between –

(a) factor Income and Transfer Income

(b) Final Goods and Intermediate Goods

(c) Consumption goods And Capital Goods

### **MARKING SCHEME**

1. Inverse relationship between price and demand of a good , other things remains constant , is termed law of demand .
2. (a) few firms  
(b) Firms are interdependence in taking price and output decision.  
(c) Non price competition (any one)
3. Prefect competition.
4. Because it is a necessity.
5. Firms produced differentiated products.
6. (i) Nature of good 1\2

Demand is inelastic in case necessities while elastic in case of luxuries 1

(II) Number of substitutes  $\frac{1}{2}$

More the number of substitution more the choice the consumer has and therefore more elastic the demand 1

|    |        |     |     |     |    |     |                        |
|----|--------|-----|-----|-----|----|-----|------------------------|
| 7. | output | AVC | AFC | TVC | MC | ATC |                        |
|    | 1      | 30  | 60  | 30  | 30 | 90  | $\frac{1}{2} \times 6$ |
|    | 2      | 28  | 30  | 56  | 26 | 58  |                        |
|    | 3      | 32  | 20  | 96  | 40 | 52  |                        |

|               |        |            |   |
|---------------|--------|------------|---|
| 8. PRICE (Rs) | TR(Rs) | OUTPUT(RS) |   |
| 4             | 480    | 120        | 1 |
| 5             | 720    | 144        | 1 |

$$\begin{aligned}
 Ed &= \% \text{ change in quantity} / \% \text{ change in price} & 1 \\
 &= 24/1 \times 4/120 \\
 &= 0.8
 \end{aligned}$$

Or

**CHANGE IN QUANTITY SUPPLIED:** - It is caused by a rise/fall in the price of a commodity. It is expressed either in form of an expansion in supply or contraction in supply. Expansion and contraction in supply are represented diagrammatically in the form of a movement along a given supply curve. Contraction is due to fall in price.

**CHANGE IN SUPPLY:-** A change in supply of a commodity caused by factors other than Price such as

- i) change in technology.
- ii) change in taxation policy of the government
- iii) change in goals of the firms etc.

Change in supply is represented graphically by a rightward or leftward shift. Decrease is due to fall in Factors other than the price. Leftward shift shifting of supply curve leads to decrease the supply.

9. Due to homogenous product price remain constant .Because supplier has no ground to change price.

| Consumption units | Total utility | Marginal utility |
|-------------------|---------------|------------------|
| 1                 | 4             | 4                |
| 2                 | 7             | 3                |
| 3                 | 9             | 2                |
| 4                 | 10            | 1                |

Or any other relevant schedule

Explain the law of diminishing marginal utility on the basis of above schedule

10. Increase in income leads to increase in demand at the given price ;4

1. This lead to excess demand.
2. Leads to competition among the buyers as a result price start rising.
3. Rise in price leads to rise in supply and fall in demand
4. These change continue till supply and demand become equal at new equilibrium price.
5. Equilibrium price rise.

or

The demand curve slopes downward because of :- i) Law of diminishing marginal utility : According to this law, as a consumer in a given time, increases the consumption of a thing, the utility from each successive unit goes on diminishing A Consumer gets maximum satisfaction. When the price of a commodity is equal he its marginal utility. As more units are bought, their marginal utility diminishes. Thus, a consumer will buy more units of a commodity, with fall in its price.

ii)Income effect : Change in the price of a commodity causes a change in the real income of the consumer. With fall in price, real income increases. The increased real income is used to buy more units of the commodity.

iii)Substitution effect : When the price of community X falls it becomes cheaper in relation to commodity. Accordingly, X is substituted for the commodity. A consumer in order to get more satisfaction, will boy more units of the commodity whose price has fallen in relation to the commodity.

iv)Uses of commodity : If a commodity has diverse uses, with the fall in the price of product consumer will buy more.

11. The economy can produce different possible combination of goods and services from the given resource.

The problem is that which of this combination should be economy produce. This is the problem of choice if more of one goods produced then lesser resources are left for producing other goods.

12. Given

change in price = -4

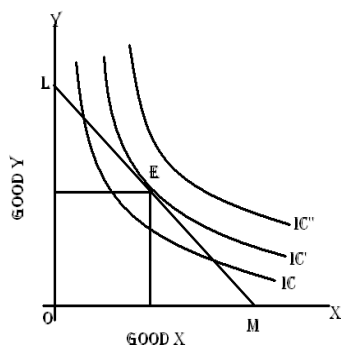
change in quantity = -10

ed = %change in quantity of demand /%change in price

-1=10/-2\*10/Q

Q = 50 UNITS.

14.The indifference curve on the budget line to find the point of consumer's equilibrium. The teacher will state the conditions for consumer equilibrium. (1)Indifference Curve should be convex to the origin. (2)Slope of Budget Line should be equal to the slope of IC. ( $P_x/P_y = MRS_{xy}$ ). (3). Where the IC is tangent to Budget line.



The teacher will use power point slides to show the diagram and explain the conditions. (1) Why will the consumer not choose a bundle on IC'. (2) Why will the consumer not choose a bundle on IC''.

OR

Indifference Curve – It is the locus of various points which represent the various combination of two goods which give equal level of satisfaction to the consumer.

2

Features of IC (Explain Any two)

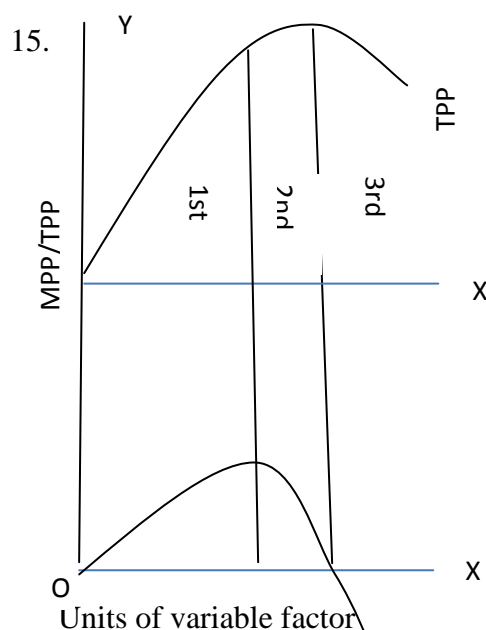
2\*2=4

(i) Sloping down ward from left to right.

2

(II) Strictly convex to the origin

(III) Higher indifference curve represent higher utility



According to the law of variable proportion when only one factor is increased while other factor remain unchanged, MP and TP change in the following manner:

Phase - 1 MP increases and TP increases at increasing rate

Phase - 2 MP decreases but is positive and TP increases at decreasing rate

Phase - 3 MP decrease and is negative and TP falls

or

|   |     |    |    |     |     |      |      |      |     |
|---|-----|----|----|-----|-----|------|------|------|-----|
| 1 | 2   | 3  | 4  | 5   | 6   | 7    | 8    | 9    | 10  |
| 3 | 7   | 12 | 16 | 19  | 21  | 22   | 22   | 21   | 19  |
| 3 | 3.5 | 4  | 4  | 3.8 | 3.5 | 3.14 | 2.75 | 2.33 | 1.9 |
| 3 | 4   | 5  | 4  | 3   | 2   | 1    | 0    | -1   | -2  |



Law of Variable Proportions-The law states that if we go on using more and more units of a variable factor (Labour) with a fixed factor( land , Capital) the total output initially increases at an increasing rate but beyond certain point, it increases at a diminishing rate and finally it falls.

This can be studied in three stages (I, II, and III) Total Physical Product (TPP) :- The total output of commodity at a particular level of employment of an input(Labour), Average Physical Product (APP):- Dividing the TPP by the number of inputs. Marginal Physical Product (MPP):- An addition made to the TPP by employing an additional unit of a variable input

TPP & MPP Relationship:- a) When MPP is positive, TPP increases at increasing rate (I stage) b) When MPP is zero, TPP is maximum,(II stage) c) When MPP is negative, TPP is falling(III stage) ( or)

(i) It means that TPP increases at an increasing rate and consequently MPP rises. It is due to (a) more efficient utilization of fixed input and (b) division of labour and specialisation due to increase in the quantity of variable input. (3)

(ii) It means output increasing in greater proportion than the increase in all input simultaneously and in the same proportion. It is due to (a) more division of labour leading to specialisation that increases productivity and (b) use of specialized machines.

16. (a) false because when TR is constant, AR will fall as output increases

(b) True, provided  $MC < AP$ .

(c) False because AP falls only when  $MP < AP$ . AP falls not because MP falls but because  $MP < AP$ .

## **SECTION - B**

17. Exports, foreign tourists etc.

18. It is the expected demand for all goods and services in the economy.

19. (i) Currency and coin with public (ii) demand deposit of commercial bank.

20. Primary deficit = fiscal deficit - interest paid.

21. Excess of aggregate supply over aggregate demand at full employment level

### **Three marks answer**

22. Through the budget government can reduce inequality of income. It can adopt progressive taxation policy and spend more on requirement of the poor.

23. It has sole authority to issue currency. It does so in accordance with the requirement of the economy.

24. If with increase in GDP inequality of income increase, poor become poorer while rich become richer. This may lead to decline in welfare even though GDP has increased.
25. Autonomous transaction take place independently of the state of B.P.O. Accommodating transaction are transaction that are determine by net consequence of Autonomous transaction.

or

DISEQUILIBRIUM IN BOP: It is a state of either deficit BOP status or surplus BOP status. Equilibrium in BOP is achieved when the net balance of all receipts & payments is zero.

CAUSES OF DISEQUILIBRIUM: Disequilibrium in BOP is caused by a number of factors, broadly categorized as (a) economic factors (b) political factors (c) social factors. Following are the details:

ECONOMIC FACTORS: -Huge development expenditure: Huge development expenditure by the government owing to which there are large scales imports. It may cause a deficit BOP disequilibrium.

Business cycle: Business cycles in terms of recession, depression, recovery & boom. A period of boom may witness a large scale export of a country. Accordingly a 'surplus BOP disequilibrium' may occur.

High rate of inflation: High rate of inflation in domestic market, compelling large scale imports of essential goods. This drives the economy towards deficit BOP disequilibrium

26. When price of foreign exchange rises,

- (i) Import become dearer resulting in less import and therefore falls demand for foreign currency.
- (ii) Tourism abroad become costlier and so demand for foreign currency falls.(or any other points)

27. (a) Receipts which lead to either reduction in assets or increase in liabilities are called capital receipts. Receipts which neither reduced assets not create any liability are revenue receipts.

(b)Direct tax is a tax whose incidence and impact fall on the same person .indirect tax is a tax whose incidence and impact fall on the different person.

28. (I) false, it can be negative at low level of income when consumption expenditure is greater than income.

(II) false, it varies from 1 to infinity.

29. Money creation by bank is determine by (1) fresh deposit and( 2) legal reserve ratio.

Suppose fresh deposit is Rs 10000 and LRR is 20%. Initially bank keeps Rs. 2000 as cash and lendsRs 8000. Those who barrow spend this Rs8000. it is assumed that this rupees 8000 comes into bank as a fresh deposit .bank again keep 20% of it as cash reserve and lend the rest in this way money creation goes on. Total money creation is Rs 50000.

Money creation = initial deposit  $\times$   $1/LRR$ .

OR

$M_1$  = Currency with Public + Demand Deposits + Other deposit with RBI

$M_2$  =  $M_1$  + Deposit with post office savings bank account

$M_3$  =  $M_1$  + Time Deposits with Banks

$M_4$  =  $M_3$  + Total deposits with post offices (Excluding NSC)

30.  $MPC = 3/4$ ,  $MPS = 1/4$ ,  $K = 4$

(I)  $\Delta Y = \Delta I \times K$

$$= 1000 \times 4$$

$$= \text{RS}4000 \text{ Crore}$$

(II) Given that  $\Delta Y = \Delta C + \Delta I$

$$\Delta C = \Delta Y - \Delta I$$

$$= 4000 - 1000$$

$$\text{Rs } 3000 \text{ crore}$$

31. (a) it is factor income from abroad, so will be included in N.I

(b) It is transfer receipts, so it is not included in N.I.

(c) Not included in N.I. because it is a non-factor receipt as the loan is not used for production but for consumption.

32. (A) GDP at factor cost = (i) + (ii) + (v) + ((VI) - (vii) - (viii+ix))

$$= 800 + 200 + 150 + 100 + (300 - 200 - 50)$$

$$= \text{Rs } 1300 \text{ crore.}$$

(B) NFIFA = GNP @ MP – GDP @ MP

$$= (VI) - (GDP@FC + (XI))$$

$$= 1400 - (1300 + 120)$$

$$= -20$$

$$FITA = FIFA - NFIFA$$

$$= 60 - (-20)$$

$$= \text{Rs } 80 \text{ crore}$$

OR

**FACTOR INCOME-** Factor Income is the income received by the factors of production for rendering factor services in the process of production (wage, rent, interest and profit).

**TRANSFER INCOME-** Transfer Income refers to the income received without rendering any productive services in return (old age pension, unemployment allowances).

**FINAL GOODS-** Final Goods are those goods which are used either for consumption or for investment (Cloths, TV set, Cars, Machinery).

**INTERMEDIATE GOODS-** Intermediate Goods are those goods which are used either for resale or for further production (Milk purchase by dairy shop, tyres purchased by a cycle shop).

**CONSUMPTION GOODS-** Consumption Goods are those goods which satisfy the wants of the consumers directly (Bread, Butter, Shirts etc).

**CAPITAL GOODS-** Capital Goods are those goods which help in production of goods and services (Machinery, equipments, Plants etc).

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### Sample Question Paper 3

Subject: Economics

Time: 3 Hours

CLASS: XII

Max. Marks: 100

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#### General Instructions

All questions in both the sections are compulsory.

1. Marks for questions are indicated against each.
  2. Question number 1-5 and 17 – 21 are very short answer questions carrying one mark each. They are required to be answered in one sentence each.
  3. Question number 6-10 and 22 – 26 are short-answer questions carrying three marks each. Answers to them should not normally exceed 60 words each.
  4. Question number 11-13 and 27 - 29 are also short-answer questions carrying 4 marks each. Answers to them should not normally exceed 70 words each.
  5. Question numbers 14-16 and 30 – 32 are long answer questions carrying 6 marks each. Answers to them should not normally exceed 100 words.
  6. Answers should be brief and to the point and above word limit be adhered to as far as possible.
- 

#### Section A

- |   |  |   |
|---|--|---|
| 1 | What does rightward shift of production possibility curve indicate?                                | 1 |
| 2 | Give the meaning of Marginal utility.  | 1 |
| 3 | Explain Inferior Goods.  | 1 |
| 4 | What change will take place in marginal product, when total product increases at diminishing rate? | 1 |
| 5 | Under which market form the firms are interdependent?  | 1 |
| 6 | Explain the central problem of 'How to produce' with the help of an example.                       | 3 |
| 7 | State any three causes of rightward shift of demand curve.   | 3 |

OR

State any three factors determining elasticity of demand, and explain any one of them.

- |   |   |   |
|---|---|---|
| 8 | When price of a commodity rises from Rs. 4 per unit to Rs.5 per unit, total revenue increases from Rs.600 to Rs. 900. Calculate its price elasticity of supply. | 3 |
|---|---|---|

9 Explain the relationship between Average cost and Marginal cost with the help of a schedule. 3

10 Explain the implication of differentiated product in monopolistic competition. 3

11 Explain the effect of a rise in the price of related goods on the demand for a good X. 4

12 Differentiate change in demand and change in quantity demand with the help of diagrams. 4

OR

Explain how elasticity of demand is measured with the help of straight line demand curve.

13 Given below is the cost schedule of a firm. Its average fixed cost is Rs. 30 when it produces 3 units. Calculate marginal cost and average cost at each given level of output. 4

|                            |    |    |    |
|----------------------------|----|----|----|
| Output (units)             | 1  | 2  | 3  |
| Average variable cost (Rs) | 30 | 28 | 32 |

14 Explain consumer's equilibrium with the help of Indifference curve approach. 6

15 There is a simultaneous decrease in demand and supply of a commodity. When will it result in: 6

(a) No change in equilibrium price.

(b) A fall in equilibrium price. Use diagrams.

16 Explain the law of variable proportions with the help of a diagram 6

OR

Explain producer's equilibrium with the help of MR and MC Approach.

### Section B

17 Give meaning of aggregate supply. 1

18 What can be the minimum value of multiplier? 1

19 What is excess demand? 1

20 Define bank rate. 1

21 A government budget shows a primary deficit of Rs.4400 crore. The revenue expenditure on interest payment is Rs.500 crore. How much is the fiscal deficit?

22. State any three items of current account of BOP Account? 3

23 From the following data calculate its net value added at factor cost : 3

(Rs. In Lacs)

|        |                        |     |
|--------|------------------------|-----|
| (i)    | Subsidy                | 40  |
| (ii)   | Sales                  | 700 |
| (iii)  | Exports                | 20  |
| (iv)   | Closing stock          | 100 |
| (v)    | Opening stock          | 120 |
| (vi)   | Intermediate purchases | 150 |
| (vii)  | Depreciation           | 30  |
| (viii) | Import of raw material | 25  |

24 Explain any two functions of money. 3

25 Explain the function of a central bank as a banker to the government. 3

26 How can a government budget help in reducing inequalities of income? Explain. 3

OR

What do you mean by Fiscal deficit? Give any two implications of fiscal deficit. 3

27 What is the difference between revenue expenditure and capital expenditure in a government budget? Give two examples each. 4

28 Explain four sources each of demand for foreign exchange and supply of foreign exchange. 4

29 From the following information about an economy, calculate

(i) Its equilibrium level of national income and

(ii) Consumption expenditure at equilibrium.

Consumption function =  $C = 200 + 0.9 Y$  and

Investment expenditure = Rs.3000crore. 4

OR

In an economy  $S = (-) 50 + 0.5 Y$  is the saving function and Investment expenditure is 7000. Calculate i)its equilibrium level of national income and ii) Consumption expenditure at equilibrium.

30 Will the following be a part of Domestic Factor Income of India? Give reasons.

(i) Old age pension given by the Government.

(ii) Factor income from abroad.

(iii) Salaries to Indian residents working in Russian Embassy in India.

(iv) Profits earned by a company in India which is owned by a non-resident.

31 How equilibrium level of income and output is determined with the help of  $C + I$  Approach. Use diagram

OR

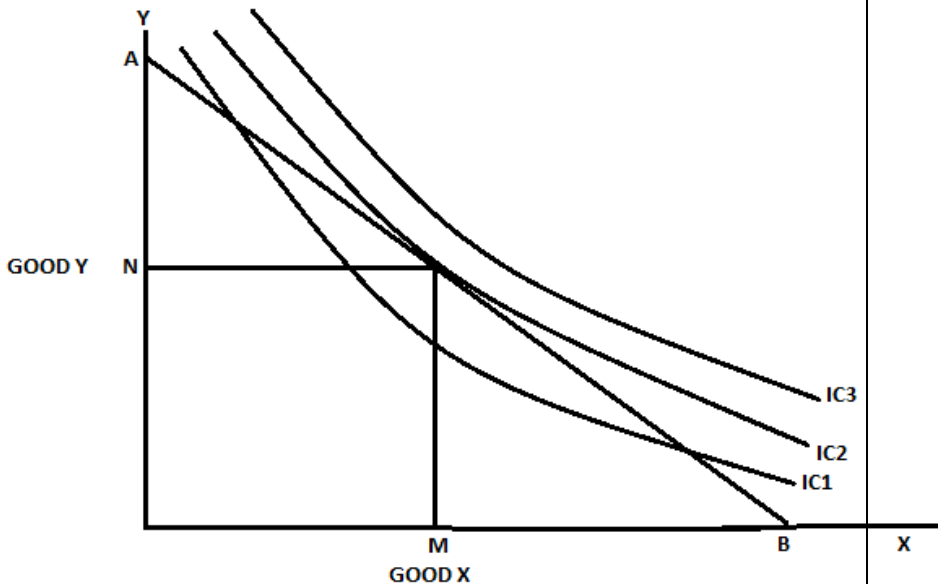
Explain consumption with the help of schedule and diagram.

32 Calculate Net National Product at Market Price and Private Income from the following data: 3, 3

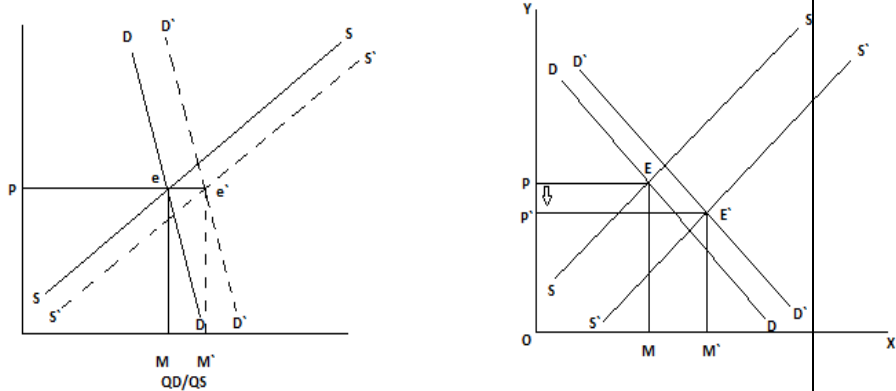
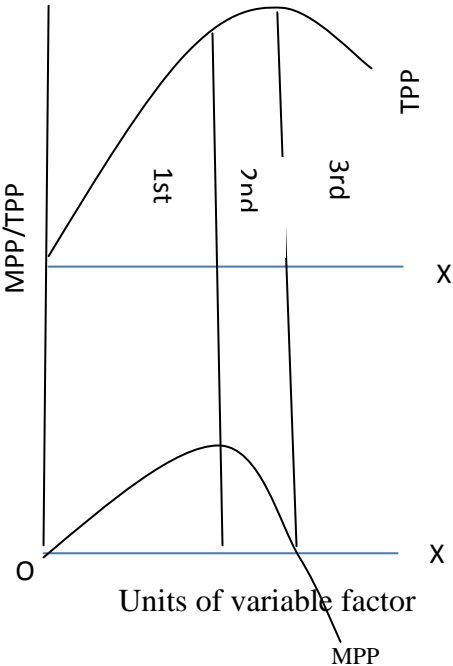
|        |  |        |
|--------|--|--------|
| (i)    | Net factor income from abroad            | (-) 5  |
| (ii)   | Private final consumption expenditure    | 100    |
| (i)    | Personal tax                             | 20     |
| (ii)   | Gross national disposable income         | 170    |
| (iii)  | Government final consumption expenditure | 20     |
| (iv)   | Net national disposable income           | 145    |
| (v)    | Corporation tax                          | 15     |
| (vi)   | Gross domestic capital formation         | 30     |
| (vii)  | Personal disposable income               | 70     |
| (viii) | Net exports                              | (-) 10 |
| (ix)   | Saving of private corporate sector       | 5      |

### Marking scheme

| Q.NO | VALUE POINTS   | MARKS                   |
|------|--|-------------------------|
| 1    | Growth of resources  | 1                       |
| 2    | Addition to the total utility from the consumption of an additional unit of a commodity.   | 1                       |
| 3    | Inferior goods are those goods whose demand decreases as income of the household's increases.  | 1                       |
| 4    | Marginal product decreases.  | 1                       |
| 5    | Oligoply   | 1                       |
| 6    | How to produce means selection of technology to produce goods and services. That is Capital intensive technology or labour intensive technology. Example (i) For the cultivation of land if labour is cheap we have to follow labour intensive technology.   | 1<br>1<br>1             |
| 7    | (i) Increase in the price of substitute goods<br>(ii) Decrease in the price of complimentary goods.<br>(iii) Increase in the income of the households on normal goods and<br>(iv)Decrease in the income of the households on inferior goods.<br>OR<br>(i) Availability of substitute goods<br>(ii) Price of the commodities<br>(a) High price more elastic<br>(b) Low price in elastic<br>(iii) Habits of the consumer (any other relevant answers)  | 1<br><br>1<br><br><br>1 |
| 8    | Price                      TR                      QS<br>4                              600                      150<br>5                              900                      180<br><br>Es= ΔQS/QS/ΔP/P = 30/150 x 4/1=4/5=.8   | 1<br><br>1<br>1         |
| 9    | Output                      TC                      AC                      MC<br>1                              20                      20                      20<br>2                              38                      19                      18<br>3                              54                      18                      16<br>4                              72                      18                      18<br>5                              100                      20                      28<br>6                              150                      25                      50<br>with explanation | 3                       |
| 10   | Differentiated products leads the sellers in the monopolistic competition as price makers. It persuade the consumer to buy the product.  | 3                       |
| 11   | Related goods; Rise in price of substitute goods causes rise in demand for other goods.<br>Rise in price of complimentary goods causes fall in demand for other goods.   | 3                       |

|        |   |        |     |   |   |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |    |     |     |     |    |    |    |    |    |     |    |    |   |
|--------|---|--------|-----|---|---|-----|----|----|----|-----|----|----|----|-----|----|----|----|-----|----|----|----|----|-----|-----|-----|----|----|----|----|----|-----|----|----|---|
| 12     | <p>Change in quantity demand is due to the change in price when other factors are constant and change in demand is due to the other factors when the price is constant.</p> <p>Change in quantity demand causes movement along the demand curve and change in demand causes shift in demand curve.</p> <p style="text-align: center;">OR</p> <p>Elasticity of demand on a straight line demand curve is determined on the basis of the formula</p> <p>ed = Lower segment of the demand curve/Upper segment of the demand curve.</p> | 4      |     |   |   |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |    |     |     |     |    |    |    |    |    |     |    |    |   |
| 13     | <table><tr><td>Output</td><td>1</td><td>2</td><td>3</td></tr><tr><td>AVC</td><td>30</td><td>28</td><td>32</td></tr><tr><td>AFC</td><td>90</td><td>45</td><td>30</td></tr><tr><td>TVC</td><td>30</td><td>56</td><td>96</td></tr><tr><td>TFC</td><td>90</td><td>90</td><td>90</td></tr><tr><td>TC</td><td>120</td><td>146</td><td>186</td></tr><tr><td>MC</td><td>30</td><td>26</td><td>40</td></tr><tr><td>AC</td><td>120</td><td>73</td><td>62</td></tr></table>  | Output | 1   | 2 | 3 | AVC | 30 | 28 | 32 | AFC | 90 | 45 | 30 | TVC | 30 | 56 | 96 | TFC | 90 | 90 | 90 | TC | 120 | 146 | 186 | MC | 30 | 26 | 40 | AC | 120 | 73 | 62 | 4 |
| Output | 1   | 2      | 3   |   |   |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |    |     |     |     |    |    |    |    |    |     |    |    |   |
| AVC    | 30  | 28     | 32  |   |   |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |    |     |     |     |    |    |    |    |    |     |    |    |   |
| AFC    | 90  | 45     | 30  |   |   |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |    |     |     |     |    |    |    |    |    |     |    |    |   |
| TVC    | 30  | 56     | 96  |   |   |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |    |     |     |     |    |    |    |    |    |     |    |    |   |
| TFC    | 90  | 90     | 90  |   |   |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |    |     |     |     |    |    |    |    |    |     |    |    |   |
| TC     | 120   | 146    | 186 |   |   |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |    |     |     |     |    |    |    |    |    |     |    |    |   |
| MC     | 30  | 26     | 40  |   |   |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |    |     |     |     |    |    |    |    |    |     |    |    |   |
| AC     | 120   | 73     | 62  |   |   |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |    |     |     |     |    |    |    |    |    |     |    |    |   |
| 14     | <p><u>Consumers equilibrium</u>: means the consumer get maximum satisfaction with the help of available income and price of goods</p> <p><u>Conditions</u> :budget line should be tangent to the indifference curve<br/>slope of indifference curve = slope of budget line</p> <div></div>  | 4      |     |   |   |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |    |     |     |     |    |    |    |    |    |     |    |    |   |
| 15     | <p>Diagram : Ratio of change in demand and supply are equal</p> <p>Ratio of change supply is more than change in demand</p>   |        |     |   |   |     |    |    |    |     |    |    |    |     |    |    |    |     |    |    |    |    |     |     |     |    |    |    |    |    |     |    |    |   |



|    |   |                            |
|----|---|----------------------------|
|    |   | 4                          |
| 16 | <p>Law of variable proportions meaning:</p> <p>If <math>\uparrow Y</math> and more units of a variable factor are employed with fixed factors, TPP increases at an increasing rate in the beginning then increases at a diminishing rate and finally starts falling. In the first phase MPP increases then falls but remains positive then becomes zero and negative.</p>  | <p>2</p> <p>2</p> <p>2</p> |

Phase I : TPP increases at an increasing rate up to OQ1 level of output

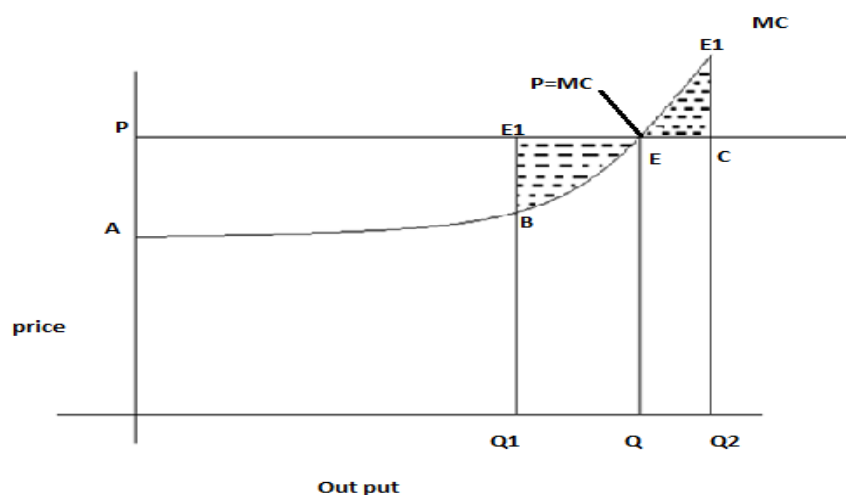
Phase II: TPP increases at a diminishing rate till it reaches its maximum point (N). MPP is falling but remains positive

When TPP is maximum MPP is zero.

Phase III : TPP starts declining MPP become negative

OR

Producer equilibrium means is the situation of that level of output which gives the producer maximum profit and he has no incentive to increase or decrease the level of output.



Condition:

- i)  $MC=MR$
- ii) After Equilibrium output  $MC>MR$
- iii) MC should be rising.
- iv) MC should cut Mr from below.

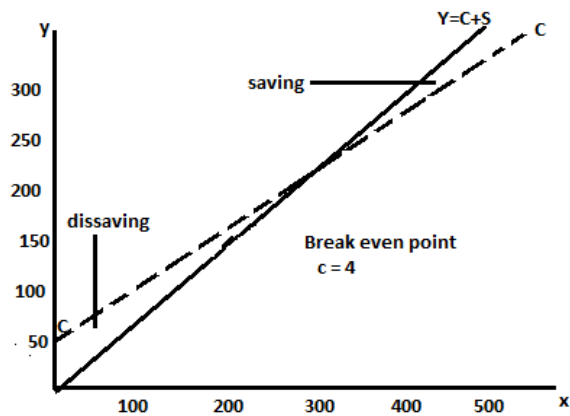
|    |   |   |
|----|---|---|
| 17 | The total supply of goods and services in the economy.                  | 1 |
| 18 | Minimum value of multiplier is 1  | 1 |
| 19 | When aggregate demand is more than aggregate supply at full employment. | 1 |
| 20 | Bank rate is the rate at which the central bank lends to the commercial | 1 |

|    |   |             |
|----|---|-------------|
|    | banks.  |             |
| 21 | Fiscal deficit = primary deficit + interest payments<br>$4400 + 500 = \text{Rs.}4900.$  | 1           |
| 22 | Export and import of goods<br>Export and import of services<br>Unilateral services  | 1           |
| 23 | $ii + (iv - v) - vi - vii - (0 - i)$<br>$700 + (-) 20 - 150 - 30 - (0 - 40)$<br>$740 - 200 = \text{Rs } 540 \text{ Lakhs}$  | 1<br>1<br>1 |
| 24 | (i) Money as a unit of value<br>(ii) Money as a medium of exchange<br>(iii) Money as a store of value<br>(iv) Money as a future payments.( any two explanation)<br>$1 \frac{1}{2} \times 2 = 3$   | 3           |
| 25 | Central bank acts as a financial advisor to the government.<br>Keeps deposits makes payment   | 3           |
| 26 | Government budget through taxation and expenditure removes inequalities of income. OR<br>Fiscal deficit is the excess of total expenditure of government over sum of its revenue receipts and capital receipts during the fiscal year.<br>Implications<br>1. Borrowing create problem of not only payment of interest but also repayment of loans<br>2. High fiscal deficit leads to inflationary condition in the economy. | 3           |
| 27 | Revenue expenditure do not make liabilities and do not cause reduction to the assets example tax and non-tax revenue<br>Capital revenue cause reduction of assets and creates liabilities.eg recovery of loans, sale of public sector units, Borrowings.  | 4           |
| 28 | Sources of demand for foreign exchange 2 marks<br>Sources of supply of foreign exchange 2 marks   | 4           |
| 29 | $Y = C + I$<br>$Y = 200 + 0.9Y = 3000$<br>$Y - 0.9Y = 200 + 3000$<br>$0.1 Y = 3200 \quad Y = 3200/0.1 = 32000$<br>Consumption $C = 200 + 0.9Y$<br>$= 200 + 0.9 (32000) = 28800 + 200 = \text{Rs.}29000$   | 1<br>1<br>1 |

|    |   |  |
|----|---|--|
|    | <p style="text-align: center;">OR</p> <p>Equilibrium <math>= Y = S = I</math><br/> <math>7000 = (-) 50 + 0.5Y</math><br/> <math>0.5Y = 7000 + 50 = 7050</math><br/> <math>Y = 7050 / 0.5 = 14100</math><br/> <math>Y = C + I</math><br/> <math>14100 = C + 7000</math><br/> <math>C = 14100 - 7000 = 7100.</math></p>   | <p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p> |
| 30 | <p>(i) No, because it is a transfer payment<br/> (ii) No, because it is earned from abroad.<br/> (iii) No, It is not in the eco territory of India.<br/> (iv) Yes, It is the normal resident of India <math>4 \times 1 \frac{1}{2} = 6</math></p>   | 6  |
| 31 | <p>Equilibrium output and Income is determined where planned spending is equal to the output.</p> <p style="text-align: center;">OUTPUT</p> <p><u>Disequilibrium condition :</u></p> <ol style="list-style-type: none"> <li>1) When planned spending <math>&gt;</math> planned out put there will be more demand for goods and services so the firms will increase the output to the equilibrium level of out put</li> <li>2) When planned spending <math>&lt;</math> planned out put there will be unsold inventories with the firm so the firm will reduce the level of output to the equilibrium out put .</li> </ol> <p style="text-align: center;">OR</p> <p>The functional relationship between consumption and income is called consumption function or propensity to consume .</p> <p><math>C = \bar{c} + by</math></p> <p>Consumption function schedule and diagram.</p> | <p>2</p> <p>2</p> <p>2</p> <p>2</p> <p>2</p> |

| N.I | C   | REMARK |
|-----|-----|--------|
| 0   | 60  | C<Y    |
| 100 | 140 |        |
| 200 | 220 |        |
| 300 | 300 | C=Y    |
| 400 | 380 | C<Y    |
| 500 | 460 |        |

Consumption



Income

\*\*\*\*\*

## **Quick Revision Question and Answers for Low Achievers**

### **FREQUENTLY ASKED QUESTIONS – CBSE BOARD EXAMINATION**

#### ***One Mark Questions (1M)***

1. What is opportunity cost?  
Opportunity cost refers to the cost of the next best alternative foregone.
2. Define Marginal rate of transformation.  
It is the amount of one good that must be given to produce one additional unit of a second good. It is also known as marginal opportunity cost.
3. Give two examples of Micro economic variables/ studies.
  - a. Individual demand
  - b. Individual savings
4. Why does an economic problem arise?  
It is due to unlimited wants and limited resources.
5. What is meant by inferior goods in economics?  
Inferior goods refer to those goods whose demand decreases with rise in income of the consumer.
6. Define budget line.  
Budget line shows all combinations of two goods that a consumer can buy with his income at a given price.
7. What is a demand schedule?  
It is a tabular representation of different quantities demanded at different levels of prices
8. Define normal goods.  
Normal goods are those goods whose demand rises with increase in income of consumer.
9. Define indifference curve.  
It shows the various combinations of two goods which provide same level of satisfaction to the consumer.
10. Define price elasticity of demand.  
Price elasticity of demand refers to the degree of responsiveness of the quantity demanded to changes in price.  
$$Ed = \frac{\Delta Q}{Q} \times \frac{P}{\Delta P}$$
11. Define production function.  
It refers to the functional relationship between inputs and outputs.
12. Define Marginal physical product.  
It refers to the addition made to the total product

13. Define revenue.  
It refers to total money income from the sale of output
14. Define marginal revenue.  
It refers to the addition made to the total revenue.
15. Why is the ATC greater than AVC  
ATC is greater than AVC because ATC includes AVC and AFC
16. Define fixed cost.  
Fixed costs refer to cost which remains constant as output changes. For e.g.: rent
17. Define equilibrium price.  
Equilibrium price refers to a price at which market demand and market supply are equal.
18. In which market form the products are differentiated.  
Monopolistic competition
19. In which market form a firm is a price taker?  
Perfect competition
20. Why is demand curve under oligopoly indeterminate (uncertain)?  
Demand curve is indeterminate because of price war between the sellers.
21. Define Macro Economics?  
Macro economics studies the economy as a whole.
22. What is an Economic Territory?  
It refers to the area of a country where there is free movement of goods, human resources and capital.
23. Who is a normal resident?  
A persons or an institution who lives in a country and whose centre of interest lies in that country is called a normal resident of that country.
24. Is transfer income included in national income? Why?  
No, because transfer income does not result in the production of goods and services.
25. What is meant by Cash Reserve Ratio (CRR)?  
It is the percentage of net deposits of the commercial bank which are maintained by the RBI
26. What is meant by Bank rate?  
It is the rate at which the central bank lends money to the commercial bank.
27. What is meant by double coincidence of wants?  
It means that one person's desire to buy and sell must coincide with the other person's desire to buy and sell.
28. What is legal tender money?  
Money that is declared legally as a medium of exchange by the government is called legal tender money.

29. Define involuntary unemployment.

Involuntary unemployment refers to a situation in which people who are willing to work are unable to get work

30. What is the relationship between MPC and MPS?

$$MPC + MPS = 1$$

31. What is meant by excess demand (inflationary gap)?

Excess demand occurs when AD is greater than AS at the level of full employment equilibrium

32. What is deficient demand (deflationary gap)?

Deficient demand arise when AD is less than AS at the level of full employment equilibrium

33. What is meant by autonomous investment?

Investment which is made without depending on the profit of the enterprise

34. Define multiplier.

Multiplier is the ratio of change in income to the change in investment

$$\text{Multiplier (k)} = \frac{\Delta Y}{\Delta I}$$

35. Define government budget.

Government budget shows the estimated receipts and estimated expenditure of the government for one year.

36. Define revenue deficit in government budget.

When the revenue expenditure of the government is greater than the revenue receipts it is called revenue deficit

$$\text{Revenue expenditure} > \text{Revenue receipts}$$

37. What is primary deficit?

Primary deficit is the difference between fiscal deficit and interest payments made by the government

$$\text{Primary deficit} = \text{Fiscal deficit} - \text{Interest payments}$$

38. What is fiscal deficit?

When the total government expenditure is greater than total government receipts excluding borrowing it is known as fiscal deficit.

$$\text{Fiscal deficit} = \text{Total Government Expenditure} - \text{Total Government Receipt (excluding borrowings)}$$

39. What is meant by foreign exchange rate?

Foreign exchange rate refers to the rate at which one currency is exchanged for another currency



40. Name the two accounts in the balance of payments
- Current account: It shows the imports and exports of goods and services and transfer payments
  - Capital Account: It shows the assets and liabilities of the government
41. Why a production possibility curve is concave?  
Ans. It is due to increasing marginal opportunity cost.
42. What is primary deficit?  
Ans. Primary deficit = fiscal deficit – interest payment.
43. What is revenue deficit?  
Ans. When revenue expenditure is more than revenue receipts.
44. A rise in the price of a goods, results in an increase in expenditure on it. Is its demand elastic or inelastic?  
Ans. Inelastic because there is direct relation between price and expenditure.
45. What is consumption function?  
Ans. The relationship between income and consumption is called consumption function.
46. What is saving function?  
Ans. The relationship between income and saving is called saving function.
47. What is Barter system?  
Ans. Exchange of goods for goods is called barter system.
48. Define APC?  
Ans.  $APC = C/Y$ . The ratio of income to consumption is called APC.
49. Define APS?  
Ans.  $APS = S/Y$ . The ratio of income to saving is called APS.
50. What is excess demand?  
Ans. When  $AD > AS$  at the full employment level.
51. What is deficient demand?  
Ans. When  $AD < AS$  at the full employment level.
52. A rise in the income of the consumer X leads to a fall in the demand for that good by the consumer. What is the good X called?  
Ans. Normal good.
53. When demand for good falls due to rise in its own price. What is the change in demand called?  
Ans. Contraction of demand.
54. What happens when demand and supply curve don't intersect each other?  
Ans. Economically non-viable industry.
55. What is abnormal profit?  
Ans. It is the profit earned over and above normal profit.

56. What is break- even price?

Ans. It is the price at which firms make zero normal profit.

57. What is cartel?

Ans. It is a group of firms which jointly sets output and price so as to exercise monopoly control.

58. What are patent rights?

Ans. It is an exclusive license or right granted to a company or an Individual to produce a particular product or use a particular technology.

59. What are advertising costs/persuasive advertising?

Ans. When the expenditure incurred by a firm to persuade the potential consumer to present their brands/products as different/ better compared to other brands/products is known as advertising costs/persuasive advertising.

60. What is induced investment?

Ans. It is a kind of investment which is profit motive in nature.

61. What is autonomous /public investment?

Ans. It is a kind of investment which is not profit motivated.

62. What is linear consumption function?

Ans. It is a consumption function which is given on the basis of constant marginal propensity to consume.

$$C=c+bY$$

Where c =autonomous consumption

B=marginal propensity to consume.

63. What is the relationship between APC and APS?

Ans.  $APC+APS=1$ .

64. What is the relationship between MPC and MPS?

Ans.  $MPC+MPS=1$ .

65. What is the relationship between multiplier and MPC?

Ans. The value of multiplier varies directly with MPC.

$$K=1/1-MPC.$$

66. What is multiplier?

Ans. It is the no. by which change in investment must be multiple in order to determine the resulting change in income and output.

67. What is fiscal deficit?

Ans. When  $TE(RE+CE)>TR(RR+CR)$  of the govt.,excluding borrowing. It is called fiscal deficit .

68. What does fiscal deficit in govt. budget mean?

Ans. It means more borrowing on the part of the govt.

69. What is deficit budget?

Ans. When expenditure of the govt. is more than its receipts, it is called deficit budget.

70. What is surplus budget?

Ans. When receipts of the govt. are more than its receipts, it is called surplus budget.

71. Why borrowing treated as capital receipts?

Ans. Because it increases the liability of the govt.

72. Why payment of interest treated as revenue expenditure?

Ans. Because it does not cause any reduction in liability of govt..

73. What is factor market?

Ans. It consists of factors of production namely land, labour, capital and organization.

74. Define product market?

Ans. It consists of final goods and services.

75. What is the alternative name of micro economics?

Ans. Price theory

76. What is the alternative name of macroeconomics?

Ans. Income theory.

77. Why is change in stock is considered a part of final expenditure?

Ans. Unsold stocks left with producers are assumed as purchased by the producers themselves. That is why it is treated as investment expenditure by the producers.

78. The balance of trade shows a deficit of Rs 300 crore. The values of exports are Rs 500 crore. What is the value of imports?

Ans. Since  $\text{Balance of trade} = \text{Export} - \text{Import}$

$$300 = 500 - \text{Import}$$

$$\text{Import} = 500 - 300 = 200 \text{ crore}$$

79. Why does an economic problem arises?

Ans. It arises due to

- 1) Scarcity of resources.
- 2) Alternative uses of resources.
- 3) Unlimited wants and limited resources.

80. Define opportunity cost?

Ans. It is the cost of foregone alternative.

81. What was rightward shift of PPC indicate?

Ans. It indicates growth of resources.

82. What does leftward shift of PPC indicate?

Ans. It indicates underutilization of resources.

83. What is production function?

Ans. The technological relationship between input and output of a firm is called production function.

85. What is govt. budget?

Ans. It is an estimated receipts and expenditure of the govt. in an accounting year.

86. What is fixed exchange rate?

Ans. It is the rate of exchange which is fixed by the govt.

87. What is flexible exchange rate?

Ans. It is the rate of exchange which is determined by the forces of demand and supply of foreign exchange in the market.

88. What is foreign exchange rate?

Ans. It is the rate at which export and import of a country are valued.

89. What is balance of trade?

Ans. It is the difference between export and imports of a country are valued.

90. What is balance of payment?

Ans. It is a systematic record of all economic transaction of a country with the rest of the world in an accounting year.

91. What is “marginal rate of transformation” (Or) “marginal rate of substitution”(or) “marginal opportunity cost”.

Ans. It is the ratio of units of one good sacrificed to produce one more unit of other good.

92. Define market supply?

Ans. It refers to the sum of outputs of all the producers of a good at a price during a given period of time.

93. Define marginal cost?

Ans. It is the change in total cost by producing one more or less unit of output.

94. Define marginal revenue?

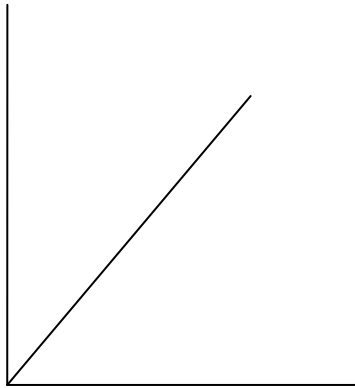
Ans. It is the change in total revenue by selling one more or less unit of commodity.

95. Which cost may there when output is even zero?

Ans. Fixed cost.

96. Draw unitary elasticity of supply?

Ans.



97. When there is a surplus in the balance of trade?

Ans. When  $\text{export} > \text{import}$  (when export is more than import).

98. When there is a deficit in the balance of trade?

Ans. When  $\text{import} > \text{export}$ .

99. Define cost?

Ans. It refers to the money expenditure incurred on the production of a given amount of commodity.

100. What induces new firms to enter an industry?

Ans. Abnormal profit induces new firms to enter an industry.

101. What happens to equilibrium of a commodity if there is decrease in its demand and increase in its supply?

Ans. The equilibrium price will decrease.

102. What is involuntary unemployment?

Ans It refers to a situation when person are willing and able to do work at a given wage rate but unable to get the work.

103. What is voluntary unemployment?

Ans. It refers to a situation when person are not willing to do work at prevailing market wage rate, although they are getting a work.

104. Give two sources of not tax revenue?

Ans. Escheat, special assessment, income from public enterprises, fees and fines etc.

105. Why entertainment tax is is indirect tax?

Ans. Because its burden can be shifted to others.

106. What is CRR?

Ans. It is the ratio of bank deposit that the commercial banks must keep with the central bank.

107. What is bank rate?

Ans. It is the rate of interest at which central bank gives loan and advance to the commercial banks.

108. Define change in demand?

Ans. When change in demand occurs due to change in factor other than price, it is called change in demand.

109. Define change in quantity demanded?

Ans. When change in demand occurs due to price alone, it is called change in quantity demanded.

110. Define utility?

Ans. wants satisfying power of a commodity is called utility.

111. Define marginal utility?

Ans. It is the change in total utility by consuming one more or less unit of commodity.

112. What is meant by the term “price taker” in the context of a firm?

Ans. It means that firm does not have any control over the price and it has to follow that price which is determined by the industry.

113. What is the price elasticity of supply of a commodity whose straight line supply curve passes through the origin forming an angle of 45 degree /75 degree?

Ans. Unitary elastic ( $e_s=1$ ).

114. If MPC And MPS are equal, what is the value of multiplier?

Ans.  $MPC=MPS=1/2$

Therefore  $K=1/MPS=1/1/2=2/1=2$  [Multiplier  $K=2$ ].

115. What is meant by SLR(Statutory liquidity ratio)?

Ans. It is the ratio of total demand and time deposits of commercial bank which it has to keep in the form of specified liquid assets.

116. What will be the effect of a rise/fall in bank rate on money supply?

Ans. It will reduce/ increase the money supply.

117. If planned savings are greater/smaller than planned investment, what will be its effect on inventories?

Ans. It will increase/decrease the inventories.

118. Define money?

Ans. "Money is what money does."

(Or)

Money is anything which is accepted as a medium of exchange and at the same time act as a store of value.

119. How is TVC derived from MC?

Ans.  $TVC = \int MC$ .

120. Define revenue of a firm?

Ans. It is the sale receipts or money receipts from the sale of a product.

121. What is average cost?

Ans. It is the cost per unit of output.

122. Define tax?

Ans. It is a compulsory payment made by household and firm to the government.

123. In which form of market demand curve is more elastic and why?

Ans. Demand curve is more elastic under monopolistic because of availability of close substitute.

124. Define production possibility curve (PPC)?

Ans. Ppc shows various combination of a pair of goods, which can be produced with the given resources and technique of production, which are fully and efficiently utilized.

125. Is import of machinery recorded in current or capital account?

Ans. It is recorded in current account because it is deal as the purchase of goods.

126. Can GDP can be greater than GNP?

Ans. Yes, GDP can be greater than GNP if NFIA is negative.

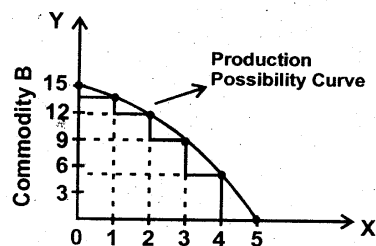
127. Can GNP can be greater than GDP?

Ans. Yes, GNP can be greater than GDP if NFIA is positive.

-----X-----

### **THREE OR FOUR MARKS QUESTIONS (3M/4M)**

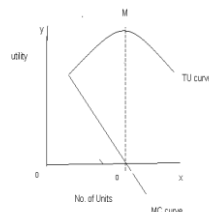
1. Explain the central problems of an economy
  - a) What to produce?  
It refers to that what goods and services are produced and in what quantities.
  - b) How to produce?  
It refers to the choice of methods of production of goods and Services.
  - c) For whom to produce?  
It refers to the distribution of income and wealth.
2. Explain the problem of How to Produce?  
It refers to the choice of methods of production of goods & services i.e. whether labour intensive or capital intensive technique is to be adopted taking into consideration the proportion of capital and labour in an economy.
3. Explain Production Possibility curve with the help of diagram?  
**Production Possibility Curve** refers to a curve which shows the various production possibilities that can be produced with given resources and technology.



If the economy devotes all its resources to the production of commodity B, it can produce 15 units but then the production of commodity A will be zero. There can be a number of production possibilities of commodity A & B

If we want to produce more commodity B, we have to reduce the output of commodity A & vice versa.

4. Explain the relationship between Total utility and Marginal utility?



- a) TU increases at diminishing rate when MU is declining and Positive.
- b) TU is maximum, when MU is '0' (Zero)
- c) When MU becomes Negative, TU declines.



5. State the Properties of Indifference Curve?
  1. Indifference curves slopes downward from left to right
  2. Indifference curves are Convex to the origin
  3. Two Indifference curve never intersects each other
  4. A Higher IC gives more satisfaction than the Lower IC.
6. State the Law of Diminishing marginal utility?  
 Law of Diminishing marginal utility: As a consumer goes on consuming more and more units of a commodity the additional satisfaction that he derives from the extra unit of consumption goes on falling.

Schedule

| Quantity Consumed | Marginal Utility ( Units) |
|-------------------|---------------------------|
| 1                 | 10                        |
| 2                 | 8                         |
| 3                 | 6                         |
| 4                 | 4                         |
| 5                 | 2                         |

7. State any three causes of decrease in demand?  
(Or)

Mention any three causes for leftward shift in demand curve

- a) Decrease in income of the consumer.
- b) Fall in the price of substitute good
- c) Rise in the price of complementary goods.

8. State any three causes of Increase in demand?  
(Or)

Mention any three causes for rightward shift in demand curve?

- a) Increase in the income of consumer
- b) Price of substitute goods rise.
- c) Price of complementary goods fall
- d) Tastes & preferences of a consumer rises

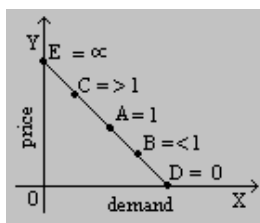
9. At price of Rs. 20 Unit the quantity demanded is 300 units. Its price falls by 10% its quantity demanded rises by 60 units. Calculate price elasticity.  
 Rise in Price = 10% (Given)

$$\begin{aligned}
 \therefore \text{ Rise in Quantity} &= \frac{\Delta Q}{Q} \times 100 \\
 &= \frac{60}{300} \times 100 \\
 &= 20\%
 \end{aligned}$$

$$\begin{aligned}
 \therefore \text{ED} &= \frac{\text{Percentage change in Quantity demanded}}{\text{Percentage change in price}} \\
 &= 20 / 10 \\
 &= 2
 \end{aligned}$$

**$\therefore$  Elasticity is greater than unity  $\therefore \text{ED} > 1$**

10. Draw a straight line demand curve and show on it a point at which

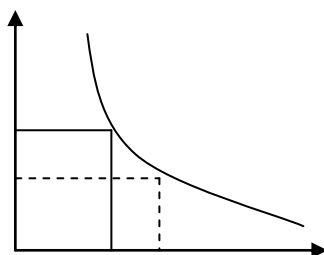


a)  $ed > 1$  b)  $ed < 1$ , c)  $ed = 1$ ?

11. State the law of demand with help of a schedule and diagram?

Law of demand states that there is an inverse relationship between the price of a commodity and its quantity demanded assuming all other factors affecting demand remain constant.

When price of a good falls, the demand for the good rises and when the price rises the demand falls.



| Price | Quantity Demanded |
|-------|-------------------|
| 5     | 1                 |
| 4     | 2                 |
| 3     | 3                 |
| 2     | 4                 |
| 1     | 5                 |

12. State the relationship between Average Product and Marginal Product?

1. When  $MP > AP$ , AP is rising
2. When  $MP = AP$ , AP is maximum
3. When  $MP < AP$ , AP is falling

13. What are the reasons for diminishing returns to factor?

- A. Over utilization of fixed factors-As more and more units of the variable factor continues to be combined with the same fixed factor, the fixed factor gets over utilized.
- B. Imperfect factor substitution-More and more of variable factor cannot be continuously used in place of fixed factor.

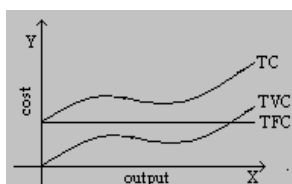
14. Distinguish between Fixed cost and variable cost.

| Fixed Cost  | Variable Cost   |
|---|---|
| <ol style="list-style-type: none"> <li>1. It will not change with changes in levels of output.</li> <li>2. It can never be zero</li> <li>3. Examples : Salary to Permanent employees, Rent</li> </ol> | <ol style="list-style-type: none"> <li>1. It changes with changes in levels of output.</li> <li>2. It is zero when output is zero</li> <li>3. Examples: Salaries to Temporary employees, Fuel charges.</li> </ol> |

15. Explain the relationship between Average Variable Cost (AVC) Average Total Cost (ATC) and marginal Cost (MC)?

1. When  $MC < AVC$  &  $ATC$ ,  $AVC$  &  $ATC$  are falling
2. MC cuts  $ATC$  and  $AVC$  at their minimum point
3. When  $MC > AVC$  &  $ATC$ ,  $AVC$  &  $ATC$  are rising.

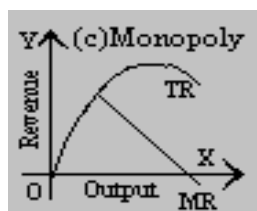
16. Draw TFC, TVC and TC in a single diagram.



17. Give the relationship between Total Revenue (TR) and Marginal Revenue (MR)?

1. When MR is positive, TR increases but at diminishing rate.
2. When MR is Zero, TR becomes maximum.

18. When MR is negative, TR starts declining but remains positive



19. State the law of supply with a help of a schedule and diagram?

Other things being constant, there is a direct relation between price of a commodity and its quantity supplied i.e. higher the price more the supply and vice-versa.

| Price | Quantity Supplied |
|-------|-------------------|
| 1     | 1                 |
| 2     | 2                 |
| 3     | 3                 |
| 4     | 4                 |
| 5     | 5                 |

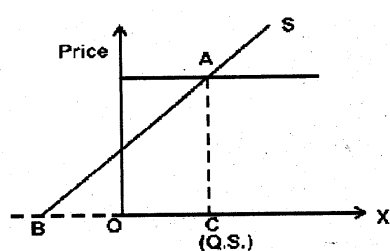
20. As the price of peanut packets increases by 5 % , the quantity supplied of peanut rises by 8 % . What is elasticity of supply?

Es = percentage Change in quantity supplied/ percentage change in Price

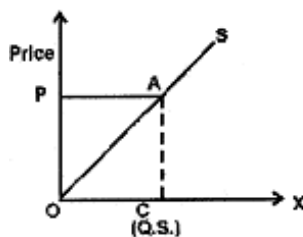
$$= 8/5$$

$$= 1.6 \text{ (Hence the supply is elastic)}$$

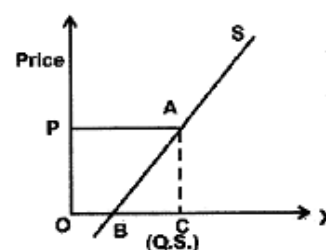
21. What will be the price elasticity of supply at any point on a straight line curve if 1) supply curve intersects ox axis in its negative range 2) supply curve intersects ox axis in its positive range.3)supply curve passes through the origin?



$$Es > 1$$



$$Es = 1$$



$$Es < 1$$

Geometric Method:-

22. List the three main features of oligopoly?

- A. Few sellers in the market
- B. Price Rigidity.
- C. Firms sell homogenous or differentiated products.
- D. Behavior of each firms dependence on the other firms.

23. State any three features of Monopoly?

1. A Single seller
2. No close substitute available.
3. No freedom of entry of new firms.
4. Possibility of price discrimination.

24. How is equilibrium price determined in perfect competition market?

Equilibrium price is the price at which quantity demanded is equal to quantity supplied. It is determined at the point where the demand curve intersects supply curve.

| Price | Quantity Demanded | Quantity Supplied |
|-------|-------------------|-------------------|
| 1     | 50                | 10                |
| 2     | 40                | 20                |
| 3     | 30                | 30                |
| 4     | 20                | 40                |
| 5     | 10                | 50                |

25. Explain the effect of an increase in demand of a commodity on its equilibrium price and quantity?

Increase in demand causes a rightward shift in demand curve keeping the same supply curve. As a result the equilibrium price and quantity both will increase.

26. What happens to the equilibrium price when increase in demand is equal to increase in supply?

In case of equal increase in demand and supply the equilibrium price remains unchanged but the equilibrium quantity rises.

27. Difference between Micro and Macro economics

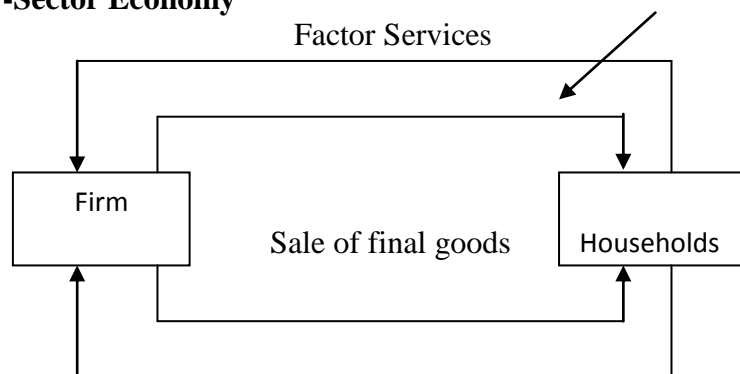
| Micro Economics                                      | Macro Economics                                      |
|--|--|
| 1. It is the study of individual units of an economy | 1. It is the study of the whole economy              |
| 2. It deals with allocation of resources             | 2. It deals with growth and development of resources |
| 3. It is also called price theory                    | 3. It is also called income theory                   |

28. Explain the circular flow of Income in a two sector model

There are only two sectors namely Firms and households. Households provide factor services to the firms and firms hire factor services from the households. Household spend their entire income on consumption of goods and services and firms sell their entire goods to the households.

There are two types of market in this economy: Factor market - for Factors of Production and Product market for goods and Services.

### Two -Sector Economy



29. Explain briefly the income approach to measure national income. Under income method to calculate the National Income, following steps have been taken into account:-

- i) First of all production units which use factor services are identified.
- ii) Estimate the following factor incomes:-
  - a) Compensation of employees
  - b) Rent, Interest, Profits
  - c) Mixed Incomes.

The sum total of the above factor income is NDPFC

Add net factor income from abroad to the NDPFC to arrive at National Income.

30. Explain the following terms

- a) Business fixed investment
  - b) Inventory Investment
  - c) Residential construction Investment
  - d) Public Investment.
- a) Business Fixed Investment: - It is the amount spent by business units on purchase of newly produced plants and equipments.
  - b) Inventory Investment: - It refers to the net change in inventories of final goods, semi-finished goods, raw material etc.
  - c) Residential Construction Investment: - It is the amount spent on the building of housing units.
  - d) Public Investment:- It includes all capital formation carried by the Govt. such as building of roads, hospitals , schools.

31. Name the components of aggregate demand (AD). Explain any one of them.  
Following are the components of AD

$$AD = C + I + G + (X-M)$$

Simplifying  $AD = C + I$ , Where 'C' refers to Household consumption demand and 'I' refers to Investment Demand.

32. Distinguish between APC and MPC. The value of which of them can be more than one and when?

APC is the average consumption level of the people. Which is equal  $APC = C/Y$ .

MPC is the addition in consumption due to increase in income i.e.  $MPC = \Delta C / \Delta Y$ . APC can be more than one when consumption is greater than Income.

33. Explain the relationship between MPC and MPS.

Increase in income is either increase in consumption or increase in saving. Therefore

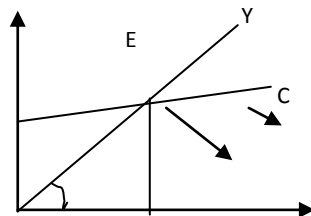
$$\Delta Y = \Delta C + \Delta S \quad (\text{Dividing both sides with } \Delta Y)$$

$$\frac{\Delta Y}{\Delta Y} = \frac{\Delta C}{\Delta Y} + \frac{\Delta S}{\Delta Y}$$

$$1 = MPC + MPS$$

34. What is consumption function? Explain using suitable diagram.

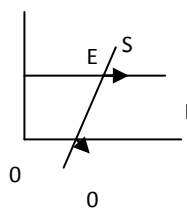
Functional relationship between Consumption and disposable income.



X axis measures income and y axis measures consumption. Point E shows equality between consumption and income. This is Break Even point. To the left of this point consumption is more than income. So it is -ve savings. To the right of point E is +ve savings.

35. What is Break Even point? Explain with the help of saving function.

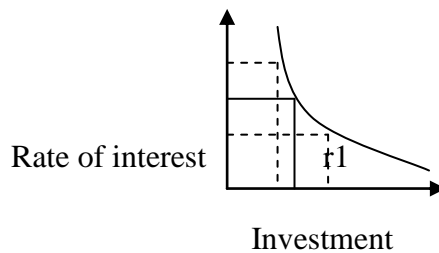
Breakeven point is a point where consumption equals income and saving is equal to zero. As explained below.



At point E saving is equal to zero, so point E is called Break Even point. To the left of point saving are -ve, and to the right of E saving are +ve.

36. Explain diagrammatically Investment demand as a component of AD.

The Business demand for investment depends upon rate of interest and marginal efficiency of capital. As is explained in the following diagram.



37. What is inflationary gap? Explain with diagram.

When at full employment level  $AD > AS$ , the situation of excess demand exists. In this situation the gap between AD and AS is called the inflationary gap.

38. What are impacts of deficient demand or deflationary gap on the level of income, output, employment and prices?

Income level will fall,      Output level will fall

Prices level will fall,      Employment level will reduce

39. What will be the impact on income /output and price of excess demand (Inflationary gap)?

In the situation of excess demand (Inflationary gap) there will be upward pressure on price. So Price will increase. Real output and employment can't increase as economy has achieved full employment. So resources are not available. But due to increase in price nominal income will increase. Economy will remain at full employment level but at higher prices

40. Explain the fiscal measures to correct the situation of deficient demand and excess demand.

Fiscal measures are the government's budgetary policy which includes taxation and government expenditure policy.

Deficient Demand:-

i) Govt. Expenditure:- Government will increase expenditure. This will increase AD to restore full employment level.

ii) Taxes:- Government will decrease taxes. This will increase disposable income. AD will increase.

Excess Demand:-

i) Govt. Expenditure:- Govt. will decrease its expenditure. So AD will decrease.

ii) Taxes:- Government Should increase taxes. It will reduce the disposable income of the household and aggregate demand will decrease.

41. What is monetary policy? What monetary measure can be adopted to control the situation of excess demand?



It is the policy adopted by central bank exercising control over money rate of interest and credit conditions. In the situation of excess demand following monetary measures are adopted.

- i) Increasing the rate of interest.
- ii) Reducing availability of credit

42. Distinguish between planned and actual saving and investment.

There is a difference between i) planned S and I and ii) Actual saving and investment. Planned saving is what house hold plan to save and planned investment is what the investors plan to investment. As they are different set of people, planned saving and investment may or may not be equal.

But actual saving investment form an accounting identity and are, there bound to be equal. This is because:

$$C + S = Y = C + I$$

$$Y = C + S$$

$$Y = C + I$$

Therefore,  $S = I$ .

43. Differentiate between full employment equilibrium and Underemployment equilibrium.

When equality between AD and AS is at full employment level it is called full employment equilibrium. But when equality between AD and AS is established before full employment equilibrium, it is called Underemployment Equilibrium.

44. What are drawbacks of barter system?

- 1) Both sale and purchase should occur simultaneously implying double coincidence of wants.
- 2) There is no common unit of exchange in a barter system, accordingly exchange remains limited.
- 3) Barter system does not allow any convenient method of storage of value
- 4) Division of goods in exchange may not be possible so some wants may remain unsatisfied.

45. Explain the Primary functions of money.

Primary functions:-

- A. Medium of Exchange:- It means that money acts as an intermediary for the goods and services in an exchange transaction
- B. Measure of value or unit of value money:- serves as a measure of value in terms of unit of account.

46. Explain the Secondary or Subsidiary function:-

- A. Standard of deferred payments:- Money is functioning as deferred Payments because its price remains relatively stable.
- B. Store of Value:- It is convenient to store value in terms of money because storage of money does not need much space.
- C. Transfer of Value:- Because of its general acceptability and the merit of liquidity, money can be easily transferred from

47. Write the six agency function of the Commercial Bank.

- 1) Transfer of funds
- 2) Collection of funds
- 3) Purchase and sale of securities.
- 4) Collection of dividends
- 5) Payment of bills & insurance
- 6) Acting as executors and trustees of wills.

48. How the Bank rates control the credit?

Bank rate is the rate of interest at which Central bank lends to Commercial banks. By raising the bank rate central bank raises the cost of borrowing. This forces the Commercial banks to raise in turn the rate of interest from the public. As lending rate rises, demand for loan for investment and other purposes falls.

49. Write any three objective of government Budget.

The objective that are pursued by the government through the budget are-

- i) To achieve economic growth.
- ii) To reduce in equalities in income and wealth.
- iii) To achieve economic stability.

50. Explain the basis of classifying government receipts into revenue receipts & capital receipts.

Revenue Receipts:-A government revenue receipts are those receipts

- i) which neither create liability
- ii) Nor reduces assets of the government Eg. Taxes, Non-Tax Revenue

Capital Receipts: - Capital Receipts refer to those receipts of the government which

- i) Tend to create a liability or
- ii) Causes reduction in its assets of the government. eg. Borrowings, Income from Disinvestment

51. Distinguish between direct tax and indirect tax

52.

| <u>Direct Tax</u>  | <u>Indirect Tax</u>   |
|--|---|
| 1. Liability to pay and burden of direct tax falls on same person. | 1. Liability to pay and burden of direct tax falls on some other person.      |
| 2. Levied on income and property of person.                        | 2. Levied on goods and services on their sale, production, import and export. |
| 3. Eg. Income tax  | 3. eg. Sales tax  |

53. Define revenue receipts. Write the groups in which they are classified.

Any receipts which do not either create a liability or lead to reduction in assets is called revenue receipts. Revenue receipts consist of

- 1) Tax Revenue and
- 2) Non-Tax Revenue.

54. Distinguish between Revenue and Capital expenditure.

| <u>Revenue Expenditure</u>  | <u>Capital Expenditure</u>  |
|---|---|
| <ol style="list-style-type: none"> <li>1. It does not result in creation of assets</li> <li>2. It is for short period and recurring in nature</li> <li>3. Eg. Expenditure on salaries of employees</li> </ol> | <ol style="list-style-type: none"> <li>1. It result in creation of assets</li> <li>2. It for long period and non-recurring in nature</li> <li>3. Eg. Expenditure on acquisition of assets like land, building etc.</li> </ol> |

55. Write a note on plan and non-plan expenditure of the government with example.

Plan Expenditure:- Plan expenditure refers to the estimated expenditure which is provided in the budget to be incurred during the year on implementing various projects and programmes included in the plan. Such expenditure is incurred on financing the central plan relating to different sectors of the economy

Non – Plan Expenditure:- This refers to the estimated expenditure provided in the budget for spending during the year on routine functioning of the government. Its examples are expenditure incurred on government administrative services, salaries and pension etc.

56. Distinguish between development and non-developmental Expenditure.

| <u>Developmental Expenditure</u>   | <u>Non-developmental Expenditure</u>  |
|--|---|
| <ol style="list-style-type: none"> <li>1. It refers to expenditure on activities which are directly related to economic &amp; social development of the country</li> <li>2. It directly contribute to national product</li> <li>3. Eg. expenditure on education health etc.</li> </ol> | <ol style="list-style-type: none"> <li>1. It refers to expenditure incurred on essential general services of the government</li> <li>2. It does not contribute directly to national product</li> <li>3. Eg. Expenditure on defence, subsidy on food etc.</li> </ol> |

57. State four main sources of demand for foreign currency

The four main sources of demand for foreign currency are:-

1. To purchase goods and services from other countries.
2. To send a gift abroad.
3. To purchase financial assets in a particular country and
4. To speculate on the value of foreign currencies

58. State three main source of supply of foreign currencies into the domestic economy.

1. Foreigners purchasing home country's goods and services through exports.
2. Foreign investment in home country through joint ventures or through financial market operation and
3. Foreign currencies flow into the economy due to currency dealers and speculators.

59. Differentiate between balance of payment and balance of trade.

| Balance of Trade   | Balance of Payments  |
|--|--|
| 1) Balance of trade is a record of only visible items i.e. exports and imports of goods.           | 1. Balance of payments is a record of both visible items (goods) and invisible items (services)                      |
| 2) Balance of trade is a narrower concept as it is only a part of the balance of payments account. | 2. Balance of payments is a wider and more useful concept as it is a record of all transactions in foreign exchange. |
| 3) Balance of trade can be in a deficit, surplus or balanced                                       | 3. Balance of payments must always balance   |

60. Explain the components of capital account

It records are international transactions that involve a resident of the domestic country changing his assets with a foreign resident or his liabilities to a foreign resident.

Various forms of capital account transactions :-

- 1) Private Transactions :- There are transactions that effect the liabilities and assets of individuals.
- 2) Official Transactions :- Transactions affecting assets and liabilities by the govt. and its agencies.
- 3) Portfolio Investment :- It is the acquisition of an asset that does not give the purchaser control over the asset.
- 4) Direct Investment :- It is the act of purchasing an asset and at the same time acquiring control of it.

The net value of the balance of direct and portfolio investment is called the balanced on Capital Account.

61. Differentiate between autonomous and accommodating items.

| Autonomous Items  | Accommodating Items   |
|---|---|
| 1. Autonomous items refer to international economic transactions that take place due to some economic motive such as profit maximization. These transactions are independent of the state of the country's BOP. | 1. This refers to transactions that occur because of other activity in the BOP, such as government financing. |
| 2. These items are often called above the line items in the BOP.  | 2. These items are called below the line items.   |

### ***Four Marks Questions (4M)***

62. Explain any four precautions to be taken in estimating national income by expenditure method?

The following precautions are to be taken while calculating N.I. by the expenditure method.

- i) Do not include expenditure on intermediate goods and services:-Intermediate expenditure is a part of final expenditure hence its inclusion leads to double counting.
- ii) Do not include expenditure on second- hand goods;-Expenditure on these goods was accounted when they were purchased new.
- iii) Do not include expenditure on financial assets:-Purchasing of financial assets only leads to transfer of money from one person or one institution to another person or institution.
- iv) Include imputed expenditure on own account produced output used for consumption and investment:-The imputed value of owner occupied house, self consumed output by farmers etc must be taken into account while estimating final expenditure.

63. Explain the steps taken in estimating N.I. by product/ value added method?

- i) Classify all the production units:- Locate the domestic territory into distinct industrial sectors ie primary, secondary and tertiary sectors.
- ii) Estimate value of output:- As sum of sales and change in stock of all the 3 sectors.
- iii) Estimate value of intermediate consumption:-A sum of value of intermediate consumption of all the 3 sectors.
- iv) Estimate GVAmP:- Value of output – Intermediate consumption.
- v) Estimate NVAmP:- Deduct the value of depreciation from GVAmP.(NVAmP= NDPmp).
- vi) Estimate NDPfc:- Deduct the value of Net Indirect Taxes from NDPmp.
- vii) Estimate NNPfc :- Add the value of Net Factor Income from Abroad with NDPfc to reach NNPfc or the N.I.

64. Calculate the Gross Domestic Product at market price from the following data.

( Rs. In crores)

|  |        |
|--|--------|
| Consumption of fixed capital             | 50     |
| Closing stock                            | 40     |
| Private final consumption expenditure    | 500    |
| Opening stock                            | 60     |
| Net factor income from abroad            | (-) 35 |
| Exports                                  | 25     |
| Government final consumption expenditure | 200    |
| Imports                                  | 40     |
| Net indirect tax                         | 100    |

|                                      |     |
|--------------------------------------|-----|
| Net domestic fixed capital formation | 210 |
| Change in stock                      | 90  |

$$\begin{aligned}
 \text{GDP mp} &= \text{iii} + \text{vii} + (\text{x} + \text{xi} + \text{i}) + (\text{vi} - \text{viii}) \\
 &= 500 + 200 + (210 + 90 + 50) + (25 - 40) \\
 &= 500 + 200 + 350 + (-15) \\
 &= \text{Rs.1035 Crores.}
 \end{aligned}$$

65. Write down some of the limitations of using GDP as an index of welfare of a country

- i) The N.I. figures give no indication of the population, skill and resource of a country. Therefore the level of welfare remains low.
- ii) A higher N.I. may be due to greater area or due to concentration of some resources in one particular country.
- iii) N.I. does not consider the level of prices in a country. People may be having high income but due to high prices they might not be able to enjoy a high standard of living.
- iv) High N.I. of a country may be due to large contributions made by a few industries.

66. Explain any four functions of money.

OR

Explain briefly any two functions of money.(2006,2007,2009)

- (i) Medium of exchange – Money can be used to make payments for all transactions of goods and services.
- (ii) Measure of value – Money works as a common denomination in which values of all goods and services are expressed.
- (iii) Store of value – Wealth can be conveniently stored in the form money without loss of value.
- (iv) Standard of deferred payments – Money has simplified the borrowing and lending operations.

67. Explain the process of money creation by commercial banks.(2010)

OR

How does a commercial bank create money? (2010)

Commercial banks are able to create credit which is many times more than the deposits received by banks. Money creation or credit creation by the banks is determined by-

(a) The amount of initial deposits, and (b) The legal reserve ratio (LRR).

(Explain with an example)

Given the amount of fresh deposits and the LRR, the total money created is calculated as:

$$\text{Total money creation} = \text{Initial deposit} \times 1/\text{LRR}$$

If the LRR is 20% and there is fresh (initial) deposit of Rs. 10000,

$$\text{Total money created} = 10000 \times 1/20\% = \text{Rs. } 50000.$$

68. Explain any four functions of a central bank (2007, 2008, 2009, 2010)

- (i) **Issue of currency:-** Central bank is the sole authority for the issue of currency in the country.
- (ii) **Banker to the govt (both central and state Govt):-** It carries out all the banking business of the govt. and also manages the public debt.
- (iii) **Bankers bank and supervisor:-** It keeps a part of cash reserves of banks, lends them short term funds and provides centralized clearing facilities.
- (iv) **Lender of last resort:-** The central bank has to provide funds to commercial banks as and when they need financial help.

69. What is bank rate policy? How does it operate as a method of credit control? (2008, 2009, 2010)

Bank rate is the rate at which the central bank gives loans to the commercial banks. An increase in the bank rate leads to increase in interest of loans. This discourages borrowers from taking loans. It reduces credit creation. A decrease in bank rate will have the opposite effect.

70. What are open market operations? What is its effect on availability of credit? (2008, 2009)

Open market operations means the purchase and sale of govt securities by the central bank from/to the public and commercial banks. Sale of govt. securities reduces the reserves of commercial bank and in turn reduces credit. Purchase of securities increases the reserves and raises their ability to give credit.

71. What is the investment demand function?

Investment demand function is the relationship between rate of interest and investment demand. There is an inverse relationship between rate of interest and investment demand. Higher interest rate implies lower level of investment demand. This is because higher rate of interest is to be matched with equally higher marginal efficiency of capital. MEC starts reducing as investment level is raised. Accordingly, investment demand would increase only corresponding to lower level of MEC along with lower level of rate of interest.

72. What is deficient demand in an economy? What is its impact on output, employment and price?

Deficient demand refers to the situation when aggregate demand (AD) is short of aggregate supply (AS) corresponding to full employment in an economy.

**Effect on output:** Low level of investment and employment implies low level of output.

**Effect on employment:** Because of deficiency of demand investment level is reduced. Accordingly level of employment tends to fall.

**Effect on price:** Fall in prices is the immediate consequence of deficient demand.

73. What is fiscal policy? What possible fiscal policy measures can be taken with respect to expenditure and income to correct excess demand and deficient demand in the economy?

Fiscal policy is the revenue and expenditure policy of the government with a view to combat the situation of inflationary or deflationary gap in the economy.

**Fiscal measures to correct excess demand:** Govt. expenditure on public works, public welfare, defence etc should be reduced. Public expenditure on transfer payments and subsidies should be reduced. Taxes should be increased to lower disposable income with the people. Deficit financing must be restricted to check the flow of money. Purchasing power should be mopped up through greater public borrowings.

**Fiscal measures to correct deficient demand:** Govt. expenditure and investment should be increased. Transfer payments and subsidies be increased. Taxes should be reduced to increase disposable income of the people. Deficit financing should be increased to increase the flow of money. Public debt should be repaid to enhance purchasing power of the people.

74. Explain the concept of deflationary gap. Explain any two measures by which a Central Bank can attempt to reduce the gap.

Deflationary gap is the shortfall in aggregate demand from the level required to maintain full employment equilibrium.

Central bank can reduce this gap by adopting following two measures:

**Bank rate:** Central Bank should decrease the bank rate. A decrease in bank rate lowers the rate of interest and credit becomes cheap. Accordingly, the demand for credit expands and aggregate demand increases.

**Open Market Operations:** By buying the government securities Central Bank injects additional purchasing power into the system which results in the expansion of credit. As a result aggregate demand increases.

75. What is fiscal policy? What possible fiscal policy measures can be taken with respect to expenditure and income to correct excess demand and deficient demand in the economy?



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77. Define govt. budget. Explain briefly any three of its objectives. (2007, 2008, 2009)

Govt. budget is an annual statement of the Govt. which shows the item wise estimates of receipts and expenditure during a fiscal year.

**Objectives of govt. budget:**

- (i) Redistribution of income and wealth – Govt. with the help of taxation, subsidies, and transfer payments brings about fair distribution income.
- (ii) Reallocation of resources – The govt. aims to reallocate resources so that the social (public welfare) and economic (profit maximisation) objectives are met .
- (iii) Economic growth and stability – Govt. tries to prevent business fluctuations and maintains price and economic stability. The budget tries to raise the overall rate of saving s and investments.

78. What is a tax? Explain with the help of suitable examples the basis of classifying taxes into direct and indirect taxes.(2008, 2009, 2010)

OR

Define a tax. Distinguish between direct taxes and indirect taxes with the help of examples.

Tax is a legally compulsory payment imposed on the people by the govt. There are two types of taxes—

- (a) Direct taxes: When the liability to pay tax and the burden of that tax fall on the same person, it is called direct tax. Examples are – income tax, wealth tax, corporation tax, gift tax etc.
- (b) Indirect taxes: When the liability to pay tax is on one person and the burden of that tax falls on other persons, it is called indirect tax. Examples are – sales tax, excise duty, VAT, tax on services etc.

79. Distinguish between revenue expenditure and capital expenditure with examples.(2007, 2009, 2010)

**Revenue Expenditure:- Any expenditure that does not result in the creation of physical or financial assets, or reduction in liability. It is financed out of revenue receipts. Examples: expenditure on payment of salary, pension, interest on loans taken by the govt. etc.**

**Capital expenditure:- Any expenditure that will lead to creation of an asset or reduction in liability. It is financed out of the capital receipts of the govt. Examples: Expenditure on construction of roads, bridges, canals, grant of loans by the central govt. to the state govt.**

80. What is meant by fiscal deficit? What are its implications? (2007,2008,2010)

**Fiscal deficit** is defined as the excess of total expenditure over total receipts, excluding borrowings.  $\text{Fiscal deficit} = \text{Total expenditure (Rev. Exp. + Cap. Exp.)} - \text{Total Receipts (Rev. Rec. + Cap. Rec.) excluding borrowings.}$

Implications:

- (i) High fiscal deficit implies a large amount of borrowings wherein the govt. takes more loans to repay it. It increases the liability of the govt.
- (ii) It leads to inflationary pressure in the economy.
- (iii) It creates a large burden of interest payments in the future.
- (iv) It increases the dependence of the govt. on foreign countries.
- (v) It hampers the future growth and development prospects of the country.

81. Explain how foreign exchange rate is determined under flexible exchange rate system. Use diagram.(2007, 2008, 2009)

Under flexible exchange rate system, the equilibrium exchange rate is determined where demand for foreign exchange is equal to the supply of foreign exchange.

$\text{Demand for foreign exchange} = \text{Supply of foreign exchange.}$

Demand for foreign exchange is made to:

- (i) Purchase goods and services,(imports),
- (ii) Send gifts and grants,
- (iii) Speculate on the value of foreign currencies,
- (iv) Invest and purchase financial assets

There is an inverse relation between exchange rate and demand for foreign exchange.

Supply of foreign exchange:

- (i) By exports of goods and services,
- (ii) Direct foreign investment in home country,
- (iii) For speculative purchases by non-residents in the home country,
- (iv) Remittances from abroad

There is a direct relationship between foreign exchange rate and demand for foreign exchange.

82. Give the meanings of (i) fixed exchange rate, (ii) Flexible exchange rate, (iii) managed floating.

- (i) **Fixed exchange rate system (pegged exchange rate system):** It is a system in which exchange rate of a currency is fixed by the govt. This system ensures stability in foreign trade and capital movement.
- (ii) **Flexible (Floating) exchange rate system:** It is a system in which exchange rate is determined by forces of demand and supply of foreign currencies concerned in the foreign exchange market. There is no official intervention in the foreign exchange market.
- (iii) **Managed floating rate system:** It is a system in which foreign exchange rate is determined by market forces and central bank is a key participant to stabilize the currency in case of extreme appreciation or depreciation.

83. Distinguish between current account and capital account of balance of payment account. Mention any two transactions of capital account.

A balance of payment account (BOP) account is a statement of all economic transactions that take place between a nation and the rest of the world during a given period. BOP account broadly comprises of (i) Current account and (ii) Capital account.

**Current account:**-It is that account which records imports and exports of goods and services and unilateral transfers.

**Capital account:**-It is that account which records capital transactions such as foreign investments, loans, banking, capital, rupee debt service, other capital and monetary movements.

Components of capital account: (a) Foreign investment

- (b) Foreign loans
- (C) Banking capital and other capital
- (d) Monetary movements.

84. Distinguish between visible and invisible items in the BOP. Give one example of each.

**Visible items:** All types of goods which are exported and imported are called visible items. These are visible as these are made of some matter or material. The record of these items is available with the ports.

Examples: Tea, Jute items, Petroleum etc.

**Invisible items:** All types of services which are rendered to or received from abroad are called invisible items. These are invisible as these are not made of any matter or material. The record of these items is not available with the ports.

Examples: Transport services, Insurance and banking schemes.

### Six Marks Questions (6 M)

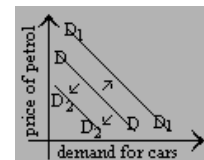
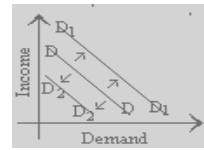
1. Explain the effect of the following on quantity demanded.
  - A. Income of the consumer
  - B. Price of related goods.

A) Incase of normal good - An increase in income leads to increase in quantity demanded of a normal good and decrease in income leads to decrease in quantity demanded of a normal good.

Incase of inferior good - An increase in income leads to decrease in quantity demanded of inferior good and an decrease in income leads to increase in quantity demanded of an inferior good.

B) Price of related goods

  - a) Substitute goods – When the price of substitute goods rises they become dearer when the price substitute goods falls they become cheaper. When the price of one good rises the consumer will substitute the other good.
  - b) Complimentary goods – When the price of complimentary goods falls, along with the rise in its demand. The demand for complimentary goods will rise. Incase of complimentary goods price of one good and quantity demanded for other good are inversely related.
2. State the causes of increase in demand and explain any two of them.
  - A. Increasing the income of the buyers for normal goods
  - B. Increase in the price of substitute goods.
  - C. Decrease in the price of complimentary goods.
  - D. Favorable changes in the taste and preference for the goods.



Increase in the income of the consumer increase the purchasing power of the buyer. At the same price he can buy more of goods so demand increases. When the price of substitute good rises the given good is used in the place of substitute good so the demand for given good increases.

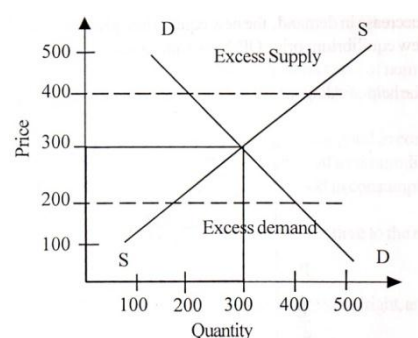
3. Define equilibrium price and explain its determination with the help of diagram and schedule.

Equilibrium price is the price at which the demand and supply are equal. At price 200 there is excess demand as demand is greater than supply. At price 400 there is excess supply as supply is greater than demand. Therefore equilibrium is attained at price 300 where demand is equal to supply

## DEMAND AND SUPPLY SCHEDULE

| Price (Rs.) | Demand (units) | Supply (units) |
|-------------|----------------|----------------|
| 100         | 500            | 100            |
| 200         | 400            | 200            |
| 300         | 300            | 300            |
| 400         | 200            | 400            |
| 500         | 100            | 500            |

This can be shown in the Diagram



When there is excess demand there will be competition among the buyers leading to rise in price, fall in demand and rise in supply. These changes continue till price rises to Rs.300, which is the equilibrium price. When there is excess supply there will be competition among the sellers leading to fall in price it leads to rise in demand and fall in supply. These changes continue till price falls to Rs. 300, which is the equilibrium price.

4. Explain the implication of the following features of monopolistic competition.

A) Differentiated products.

B) Freedom of entry and exit of firms.

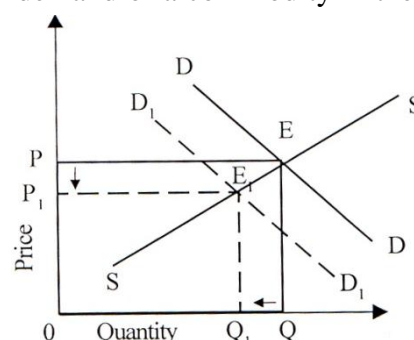
Products are differentiated on the basis of colour, design, packing, fragrance, shape, brand etc and also act as close substitute. Its implication is that since each firm is known for its product it can influence the price of its product to some extent.

Freedom of entry and exit.- Firms can freely move in and out of a group. If profitable, new firms will enter if they incur loss they are free to exit. No firm can earn abnormal profit in long run.

5. With the help of diagram explain the effect of decrease in demand of a commodity in the equilibrium price and quantity.

Effect of decrease in demand of a commodity leads to fall in the equilibrium price and equilibrium quantity.

Demand shifts to leftward showing the decrease in demand (D<sub>1</sub>D<sub>1</sub>), Supply (SS) remaining constant.



The chain effect of the decrease in demand in the equilibrium price: - This leads to excess supply in the market, which results in competition among the producers resulting in fall in equilibrium price. With the fall in price there will be downward movement in supply leading to fall in equilibrium quantity.

6. Explain the Law of Variable Proportions with help of schedule and diagram.

**Law of Variable Proportions-** The law states that if producers go on using more and more units of a variable factor (Labour) with a fixed factor( land , Capital) the total output initially increases at an increasing rate but beyond certain point, it increases at a diminishing rate and finally it falls.

This can be studied in three stages (I, II, and III) Total Physical Product (TPP):- The total output of commodity at a particular level of employment of an input (Labour), Average Physical Product (APP):- Dividing the TPP by the number of inputs. Marginal Physical Product (MPP):- An addition made to the TPP by employing an additional unit of a variable input



**TPP & MPP Relationship:-** a) When MPP is positive, TPP increases at increasing rate (I stage) b) When MPP is zero, TPP is maximum,(II stage) c) When MPP is negative, TPP is falling(III stage)

**APP & MPP Relationship:-** a) When APP rises,  $MPP > APP$  ( I stage) b) When APP is maximum ,  $APP = MPP$  (Stage II) and c) When APP decline,  $MPP < APP$ . (III Stage) (use schedule and diagram).

| Labour      | 1 | 2   | 3  | 4  | 5   | 6   | 7    | 8    | 9    | 10  |
|-------------|---|-----|----|----|-----|-----|------|------|------|-----|
| TPP<br>(TP) | 3 | 7   | 12 | 16 | 19  | 21  | 22   | 22   | 21   | 19  |
| APP<br>(AP) | 3 | 3.5 | 4  | 4  | 3.8 | 3.5 | 3.14 | 2.75 | 2.33 | 1.9 |
| MPP<br>(MP) | 3 | 4   | 5  | 4  | 3   | 2   | 1    | 0    | -1   | -2  |

7. Explain the consumer's equilibrium in case two commodities (IC) approach.

**Consumer equilibrium** refers to a situation when he spends his given income on purchase of a commodity (or commodities) in such a way that yields him maximum satisfaction.

**Condition of equilibrium:** -MU in terms of money = Price.

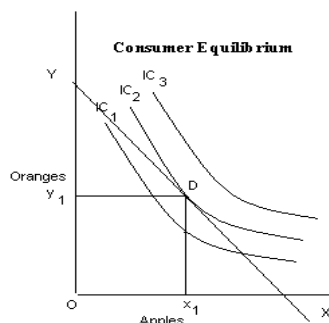
$$\text{MU of product} / \text{MU of a Rupee} = \text{Price}$$

Consumer equilibrium through indifference curve:-

**Budget line:** - It refers to all combinations of goods which a consumer can buy with his entire income and price of two goods.

Indifference curve: - the combination of two goods which gives consumer same level of satisfaction

Indifference Map: - Group of indifference curves



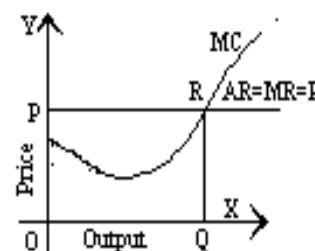
Marginal rate of Substitution (MRS):- it is the rate at which a consumer is willing to give up one good to get another good.

Consumer equilibrium:- At a point D where budget line is tangent/ touches the higher indifference curve of IC 2.  
 $MRS = P_X / P_Y$ , i.e., Ratio of prices of two goods.

8. Explain the producer's equilibrium with the help of MC and MR approach.

Producer's Equilibrium:- A producer (a firm) is said to be in equilibrium when it earns maximum profits. Profit maximization of a firm means maximizing the difference between total revenue and total cost. When the profits of the firm are maximum, the firm is in equilibrium. Firm attains equilibrium position, i.e., maximizes profits at the level of output where i)  $MR = MC$  ii)  $MC$  is rising.  $MC$  is greater  $MR$  after equilibrium level of output.

In a perfectly competitive firm maximizes profits i.e. attains producer's equilibrium when price is equal to the marginal cost. In a perfectly competitive market, the marginal revenue and average revenue of a firm coincide and equal to the market price ( $AR = MR = P$ .) A competitive firm's equilibrium is, therefore, established at the level of output where i)  $MR = MC$ , and ii)  $MC$  is rising.



$$\text{Total Revenue} = OQ \times OP = OPRQ.$$

$$\text{Profit} = OPRQ - OSRQ$$

| Units of commodity | MR | MC |
|--------------------|----|----|
| 1                  | 10 | 9  |
| 2                  | 9  | 7  |
| 3                  | 8  | 6  |
| 4                  | 7  | 7  |
| 5                  | 6  | 8  |
| 6                  | 5  | 9  |

9. Comparison of different forms of Market Structure

| Perfect Competition  | Monopoly   | Monopolistic competition  |
|--|--|---|
| <p>1. A very large number of sellers. No sellers can influence the price and supply</p> <p>2. Products are Homogenous</p> <p><b>3. Free entry and exit of the firm</b></p> <p>4. Firm is a price taker not the price maker</p> <p>5. Price is conform in the market and <math>\text{Price} = \text{MC}</math></p> <p>6. Perfect knowledge</p> <p>7. AR and MR Curve are straight line parallel to x axis ie <math>\text{AR} = \text{MR}</math></p> | <p>1. A single seller (firm) of Product</p> <p>2. Product has no close substitute.</p> <p>3. Very difficulty entry of new firm</p> <p>4. Firm is price maker not price taker</p> <p>5. Due to price discrimination price is not uniform <math>\text{Price} &gt; \text{ME}</math></p> <p>6. Price discrimination</p> <p>7. AR and MR Curve are downward sloping from left to right but less price elastic <math>\text{MR} &lt; \text{AR}</math></p> | <p>1. Number of seller is fairly large but each seller has some control over price and supply.</p> <p>2. Differentiated products with closely substitutable</p> <p>3. Freedom of entry and exit.</p> <p>4. Firm is a price maker (not absolutely)</p> <p>5. Firm has limited control over price through product differentiation</p> <p>6. High Selling cost</p> <p>7. AR and MR curve are downward sloping but more price elastic <math>\text{MR} &lt; \text{AR}</math></p> |

10. From the following data calculate National Income by

- (a) Income Method
- (b) Expenditure method



|  | Rs.(Crores) |
|--|-------------|
| 1. Compensation of Employees             | 800         |
| 2. Private Final Consumption Expenditure | 1200        |
| 3. Profit                                | 500         |
| 4. Rent                                  | 200         |
| 5. Govt. Final Consumption Expenditure   | 800         |
| 6. Interest                              | 150         |
| 7. Net Factor Income from Abroad         | 20          |
| 8. Net Indirect Tax                      | 190         |
| 9. Mixed income of Self Employed         | 630         |
| 10. Net Exports                          | (-) 30      |
| 11. Net Domestic Capital Formation       | 500         |
| 12. Consumption of Fixed Capital         | 150         |
| <u>National Income (Income Method)</u>   |             |

|                                   |                  |
|-----------------------------------|------------------|
| Compensation of Employees         | 800              |
| (+) Profit                        | 500              |
| (+) Rent                          | 200              |
| (+) Interest                      | 150              |
| (+) Mixed Income of Self employed | 630              |
| NDPFC                             | = 2280           |
| (+) Net Factor Income From Abroad | 20               |
| NNPFC                             | <u>=2300 Cr.</u> |

National Income (Expenditure Method)

|   |                  |
|---|------------------|
| Private Final Consumption Expenditure   | 1200             |
| (+) Govt. Final Consumption Expenditure | 800              |
| (+) Net Exports                         | (-) 30           |
| (+) Net Domestic Capital Formation      | 500              |
| NDPMP                                   | = 2470           |
| (+) Net Factor Income From Abroad       | 20               |
| NNPMP                                   | = 2490           |
| (-) NIT                                 | 190              |
| NNPFC                                   | <u>=2300 Cr.</u> |

11. Calculate GDP<sub>mp</sub> by (a) Product Method and (b) Income Method:

| Items                            | Rs. (Cr.) |
|----------------------------------|-----------|
| 1. intermediate consumption of : |           |
| a) Primary Sector                | 500       |
| b) Secondary Sector              | 400       |
| c) Tertiary Sector               | 300       |
| 2. Value of Output of:           |           |
| a) Primary Sector                | 1000      |
| b) Secondary Sector              | 900       |
| c) Tertiary Sector               | 700       |
| 3.                               | Rent      |
|                                  | 10        |
| 4. Compensation of Employees     | 400       |
| 5. Mixed income of self employed | 650       |
| 6. Operating surplus             | 300       |
| 7. Net factor income from abroad | (-) 20    |
| 8. Interest                      | 5         |
| 9. Consumption of fixed capital  | 40        |
| 10. Net indirect tax             |           |

Product method:

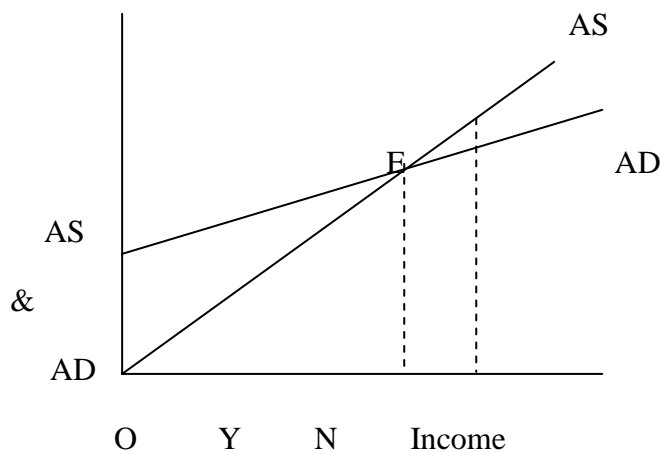
|   |                 |
|---|-----------------|
| Value of output of primary sector                     | 1000            |
| (-) Inter mediate consumption of primary sector       | 500             |
| (+) Value of output of secondary sector               | 900             |
| (-) Inter mediate consumption of secondary sector     | 400             |
| (+) Value of output of tertiary sector                | 700             |
| (-) Inter mediate consumption of tertiary sector      | 300             |
| <u>Gross value added mp=Gross domestic product mp</u> | <u>=1400 Cr</u> |

Income Method

|                                  |           |
|----------------------------------|-----------|
| Compensation of employees        | 400       |
| (+) Mixed income                 | 650       |
| (+) Operating surplus            | 300       |
| NDP at fc                        | = 1350 Cr |
| (+) Consumption of fixed capital | 40        |
| GDP at fc                        | = 1390 Cr |
| (+) Net Indirect Tax             | 10        |
| GDP at mp                        | = 1400 Cr |

12. In an economy aggregate demand is less than aggregate supply. Is the Economy in equilibrium? If not, explain the changes that will bring the economy in equilibrium.

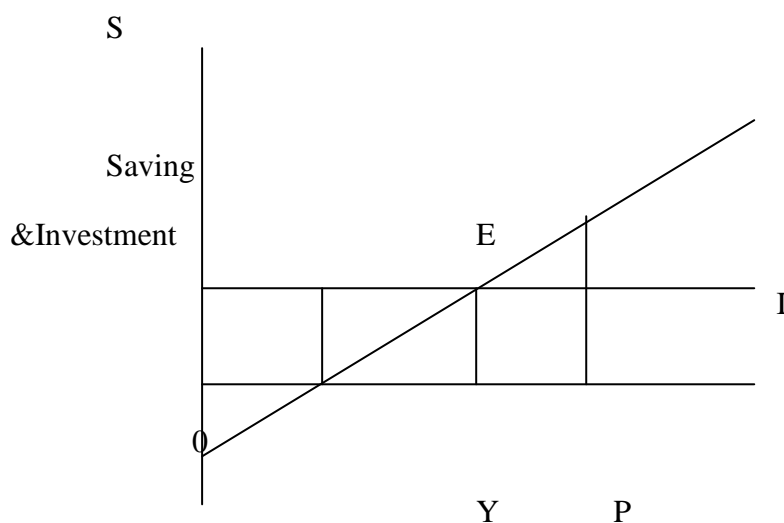
No, in an economy if aggregate demand is less than aggregate supply, economy will not be in equilibrium. An economy is said to be in equilibrium only when aggregate demand is equal to aggregate supply as shown below.



As the diagram explains economy is said to be in equilibrium at E where  $AD=AS$ , up to point E  $AD > AS$  and after point E  $AD < AS$ . When  $AD < AS$  economy will face recession. There will be unsold stock of goods and to meet this situation there will be an unplanned stock of inventory. The producer will reduce the use of factors of production to cut down the production level. This will reduce the income level from ON to OY and thus equilibrium between aggregate demand and aggregate supply will be restored at point E.

13. Explain the equilibrium level of income with the help of savings and investment function. If planned savings exceed planned investment what changes will bring about the equality between them.

Economy is said to be in equilibrium when planned savings is equal to planned investment. But we know savings and investment activities are generally done by different sections of the society. Therefore very often we can see a difference between planned saving and planned investment. It means that when  $S > I$  or  $S < I$  economy will experience disequilibrium as shown in the fig. given below.



As shown in the diagram at point E,  $S = I$ . Up to point E,  $S < I$  and after point E,  $S > I$ . Both show situations of disequilibrium in the economy.

When  $S > I$ , it means that the households are savings more than what the firms desires to invest i.e., both household consumption demand and firm's investment

are less. This will induce the producers to reduce production and this will reduce the employment opportunities. National Income will be reduced from OP to OY and thus the economy will regain equilibrium.

14. Discuss the fiscal and monetary measures taken by government to correct disequilibrium between AD and AS.

There are broadly two measures to correct disequilibrium between AD and AS. One is directly implemented by the government known as fiscal policy measures and other one is implemented by the government through the central bank of the country known Monetary policy measures.

Fiscal policy measures:

- 1) Tax – when  $AD > AS$  the economy will face inflation. To check inflationary trend in the economy the government will raise the rate of tax, money will transfer from the society to government, AD will be reduced and become equal to AS and thus disequilibrium is corrected. When  $AD < AS$  the economy will face recession. To check deflationary trend in the economy the government will lower the rate of tax, which will leave more money with the people. AD will be increased will become equal to AS and thus disequilibrium is corrected.
- 2) Public Expenditure – By increasing and decreasing public expenditure government correct disequilibrium between AS and AD. When  $AD > AS$ , economy will experience inflation and to check inflationary trend in the economy the government will reduce the public expenditure programmes which will reduce employment opportunities and purchasing power of the people. In short AD gets reduced and become equal to AS, disequilibrium is corrected. When  $AD < AS$  reverse operation will take place.

Monetary measures:

- 1) Bank rate – By lowering and raising bank rate RBI of the country will make credit dearer and cheaper to the society. When  $AD > AS$  RBI will raise the bank rate make the credit costlier and thus reduce both the consumption demand and investment demand this will reduce AD and remove the disequilibrium. Reverse operation will take place when  $AS > AD$ .
- 2) Cash Reserve Ratio – By lowering and raising CRR, RBI will bring change to the availability of credit in the society. When  $AD > AS$ , RBI will increase CRR which will reduce the availability of credit, results in reduction of AD and AD will be equal to AS. Reverse operation will take place when there is a situation of deficient demand.
- 3) Open market operations- In a situation of excess demand RBI sells securities to commercial banks which will reduce their capacity to offer loans, it will reduce AD and removes the situation of excess demand. Reverse operation will take place when there is a situation of deficient demand

15. Will the following be included in the National Income of India ? Give reason for your answer:

- 1) Salaries paid to non resident Indians working in Indian Embassy in America. No.  
Because it is part of factor income to Abroad.
- 2) Profits earned by an Indian bank from its branches abroad. Yes, it is included in the National income of India because it is a part of factor income from abroad.
- 3) Scholarships given by Govt. of India. No, This will not be included because it is transfer payment.

16. While estimating National Income how will you treat the following? Give reasons for your answer.

- 1) Imputed rent of self occupied house. - Included in national income because he pays rent to himself and it is counted as a factor payment.
- 2) Interest received on debentures- Included in national income because it is the part of Interest payment
- 3) Financial help received by flood victims- Not included because it is transfer payment. Transfers are not a productive activity.
- 4) Old age pension- Not included in national income because it falls under the category of transfer payment.

17. What are the precautions is to be taken, while we calculate national income by income method and value added method?

Income Method.

1. Transfer payment should not be included as they are not against any productive activity.
2. Income through illegal activities like smuggling, black marketing gambling etc is not included.
3. Income from the sale of second hand goods or capital gains- Not Included in national income
4. Free services provided by owners of the production units to be Included in national income.
5. Wind fall gains such as income from lotteries not to be included.

Value added Method-

1. The value of intermediate goods should not be included. Only the value of final goods should be included.
2. The value of goods retained for self consumption should be included.
3. Domestic services are not included. However production of services by paid employed persons should be included.
4. Sale and purchase of Second hand goods should not be included.
5. Voluntary work done for its own sake or for the community should Not be included.

18. Distinguish between

- a. Intermediate goods and final goods
- b. Net domestic product and Gross national product.
- c. Factor income and transfer income

| Intermediate goods   | Final goods   |
|--|---|
| <ol style="list-style-type: none"> <li>1. They are used for production of other goods and services</li> <li>2. They are meant for resale so Value gets added to these goods</li> <li>3. They remain within the production boundary</li> <li>4. Their value is not included in national income</li> </ol> | <ol style="list-style-type: none"> <li>1. They are used for final consumption</li> <li>2. They are not meant for resale, so no value is Added</li> <li>3. They remain outside the production boundary</li> <li>4. Their value is included in National income</li> </ol> |

| Net Domestic Product   | Gross National Product  |
|--|---|
| <ol style="list-style-type: none"> <li>1. It refers to the total money value Of all final goods and services</li> <li>2. Produced with in the domestic Territory.</li> <li>3. It does not include net factor Income from abroad.</li> <li>4. It does not include depreciation</li> </ol> | <ol style="list-style-type: none"> <li>1. It refers to the total They are used for money value of all final goods and services</li> <li>2. Produced within the Domestic territory plus Net factor income from abroad.</li> <li>3. It includes net factor Income from abroad.</li> <li>4. It includes Depreciation.</li> </ol> |

| Factor Income   | Transfer Income  |
|---|--|
| <ol style="list-style-type: none"> <li>1. It is income earned by rendering Productive services. Eg. Wages and salaries</li> <li>2. It is included in national income</li> </ol> | <ol style="list-style-type: none"> <li>1. It is income earned without rendering any productive Services. Eg. Old age pension ,gift</li> <li>2. It is not included in national Income.</li> </ol> |

19. Give an outline of the steps involved in the estimation of National Income with help of Income Method.

First step : Identify the producing enterprise and classify broadly under three sectors as primary, secondary and tertiary sector.

Second step : Net Domestic Income is calculated by adding

- 1) Compensation of Employees
- 2) Rent& Royalty
- 3) Profit
- 4) Interest
- 5) Mixed income of Self Employed

Third step : National Income is estimated by adding Net Factor Income from Abroad to Net Domestic Income or NDP<sub>fc</sub>

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## HOTS and Tips for Solving Numerical Problems in Economics

### TIPS FOR WORKING SUMS

1. To convert 'National' to 'Domestic', Subtract Net factor Income from abroad.
  2. To convert 'Domestic' to 'National' Add Net factor income from abroad.
  3. To convert 'Market Price' to 'Factor Cost' subtract Net indirect taxes.
  4. To convert 'Factor Cost' to 'Market Price' Add Net indirect taxes.
  5. Net factor income from abroad is the difference between factor income from abroad and factor income to abroad.
  6. Net indirect tax is indirect taxes minus subsidies.
  7. Net Exports is Export minus Import.
  8. Gross Domestic Capital formation is Gross domestic fixed Capital formation plus Change in stock.
  9. Change in stock is 'Closing stock' minus 'Opening stock'.
  10. To convert 'Gross' to 'Net', subtract depreciation.
  11. To convert 'Net' to 'Gross', Add depreciation.
  12. Depreciation is otherwise called as Capital consumption or consumption of fixed capital.
  13. Income Method is otherwise known as Factor income method.
  14. Expenditure Method is otherwise known as Final expenditure method.
  15. Value added Method is otherwise known as Net Output Method or Production Method.
  16. Compensation of Employees includes Wages and Salaries and which are paid in Cash or Kind and Employers' contribution to social security schemes.
  17. Operating Surplus is the sum of Rent, Interest and Profit.
  18. Profit includes dividend, corporate tax, and corporate savings.
  19. Corporate saving is otherwise called as retained earnings or undistributed profits.
  20. Personal disposable income is the sum of household savings and household consumption.
- (or)

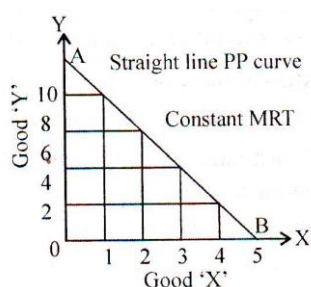
Personal disposable income = Personal savings + Personal consumption.

### HIGHER ORDER THINKING SKILLS (HOTS) QUESTIONS

#### MICRO ECONOMICS

- 1. Draw a production possibility (PP) curve when MRT is constant. Give reason.**

When marginal rate of transformation remains constants, it means that for every additional unit increase in the production of one good, the sacrifice of the production of other goods remains the same. This happens when resources are equally efficient in the production of different goods in this case we get a downward sloping straight line production possibility curve as shown..



- 2. Is the study of cotton textile industry a macro economic study or a micro economic study?**

The study of cotton textile industry is a micro economic study.

- 3. A doctor has a private clinic in New Delhi and his annual earnings are Rs10 lakhs. If he works in a Government Hospital in New Delhi, his annual earnings are Rs 8 lakhs. What is the opportunity cost of having a clinic in New Delhi?**

The opportunity cost of opening a clinic in New Delhi is Rs8 lakhs, that he could have earned in next best alternative use that is, working in Govt. hospital in New Delhi.

- 4. A raise in the income of the Consumer X leads to a fall in the demand for that good by that consumer. What is the good X called?**

Inferior good.

- 5. What happens to the demand for a good when the price of Substitute goods falls?**

When the price of substitute good falls, then the demand for the given good also falls.

- 6. Why is coefficient of price elasticity of demand negative?**

The coefficient of price elasticity of demand is always negative because there is an inverse relationship between demand and price.

- 7. Which of the following commodities have inelastic demand:**

**1. Salt 2. A particular brand of lipstick 3. Medicines 4. Mobile phone and 5. School uniform**

Salt, medicines and school uniform have inelastic demand. The reason being that a consumer has to buy these commodities even though price of these commodities changes. Even a substantial change in price leaves the demand unaffected.

- 8. When MPP is zero, what can you say about TPP?**

TPP is at its maximum.

- 9. When MPP equals APP, what will you say about APP?**

APP is at its maximum and constant

- 10. When APP is at its maximum, what is the relationship between MPP and APP?**

$MPP = APP$

- 11. What does the AFC curve look like? Why does it look so?**

AFC curve is downward sloping to right. As the output increases, the fixed cost gets distributed, i.e., AFC falls.

- 12. What happens to ATC when  $MC < ATC$ ?**

ATC will fall.

- 13. Can there be some fixed cost in the long run? If not why?**

No, there cannot be any fixed cost in the long run. The reason is that there is no fixed input in the long run.

- 14. Due to improvement of technology, the marginal costs of televisions have gone down. How will it affect the supply curve of television?**



Supply curve will shift to the right due to improvement of technology.

- 15. If a farmer grows rice and wheat, how will an increase in the price of wheat affect the supply curve of rice?**

Supply curve of rice will shift to the left

- 16. Because of cyclone in a coastal area, the sea water covers a lot of rice fields. This reduces the productivity of land. How will it affect the supply curve of that region?**

Supply curve of rice of that region will shift to left due to reduce in productivity of land because of cyclone. Due to cyclone, production of rice will fall. Now, irrespective of increase in price of rice, production (or supply) cannot rise. In other words, supply of rice will fall at the same price.

- 17. In which market form are the average and marginal revenue of a firm always equal?**

Average and marginal revenue of a firm are always equal under perfect competition

- 18. In which market form, there is a need for selling/advertising costs?**

Under monopolistic competition, there is a need of selling costs because the firms produce different brands of the product

- 19. What is that market called wherein there are a only two sellers (firms)?**

Duopoly refers to a market situation in which there are two sellers.

- 20. When do we say there is excess demand for a commodity in market?**

When at a given price, the quantity demanded of a product exceeds its quantity supplied, there is excess demand for the product.

- 21. When do we say there is excess supply for the commodity in the market?**

When at a given price the quantity supplied of a product exceeds its quantity demanded, there is excess supply for a product.

- 22. When will an increase in supply imply an increase in price but no change in quantity?**

In case of perfectly inelastic demand, an increase in supply leads to an increase in price but no change in quantity.

- 23. When will an increase in demand imply an increase in quantity demanded but no change in price?**

In case of perfectly elastic supply, an increase in demand causes no change in price but it will lead to an increase in quantity.

- 24. What is price floor? What may be the consequences of price floor?**

Price floor refers to the minimum price fixed by the government above the market determined price so that the producers of the essential items like wheat, rice etc may not suffer losses. The consequences of price floor may be: 1. Surplus of the commodity 2. The government may resort to buffer stocks to absorb the surplus in the market at the support price and sells the products to consumers below its cost of production.

- 25. What is price ceiling? What may be the consequences of price ceiling?**

Price ceiling refers to the maximum price fixed by the government below the market determined price (i.e., equilibrium price ) so that necessities may be made available to the common people at an affordable price. In India the government has imposed price ceiling on necessary items like wheat, rice, sugar etc. The consequences of price ceiling may be: 1. shortage of the commodity 2. The government may impose rationing i.e., supply of goods in limited quantity at the ration shops. 3. Black market may emerge. A black market is a situation where by the goods are sold at a price above the legal ceiling price. 4. The consumers may get inferior quality goods.

**26. Give the formula calculating slope of Budget Line?**

Slope of Budget Line is equal to the prices of the two commodities, i.e.,  $P_x/P_y$ .

**27. What is the slope of indifference Curve?**

Slope of indifference curve is equal to MRS, i.e., Marginal Rate of Substitution

**28. Explain why is the budget line downward sloping?**

Because with given money income if a consumer buys more of one good, he has to buy less of the other good.

**29. Why is the indifference Curve convex to the origin?**

Indifference curve is convex to the origin due to diminishing marginal rate of substitution.

**Suppose your friend is indifferent to the bundles (5,6) and (6,6). Are the preferences of your friend monotonic?**

No.

### **MACRO ECONOMICS**

**1. If the NDPFC is Rs. 1,000 crores, and NFA is Rs. (-) 5crores, how much will be national income (NNPFC)?**

$NNPFC = NDPFC + NFA = 1000 + (-5) = \text{Rs. } 995 \text{ crores.}$

**2. What should be added to NNPMP to get net national disposable income?**

Net current transfers from abroad should be **added** to NNPMP to obtain national disposable income.

**3. The value of the nominal GNP of an economy was Rs. 2,500 crores. in a particular year. The value of GNP of that country during the same year, evaluated at the prices of some base year was Rs.3,000 crores. Calculate the value of the GNP deflator of the year in percentage terms. Has the price level risen between the base year and the year under consideration?**

$\text{GNP deflator} = \text{Nominal GNP} / \text{Real GNP} \times 100$

$$= 2500/3000 \times 100 = 83.3\%$$

No, the price level has not risen between the base year and the year under consideration. In fact, it has fallen.

**4. Give the alternative name of value added method of estimating national income?**

The alternative name of value added method of estimating national income is the production method.

**5. State whether output produced for self consumption is included or not included in the value of output?**

The output produced for self consumption is not included in the value of output.

**6. State whether the sale of old scooter is included in national income?**

The sale of old scooter is not included in national income because it is not produced in the current year. Its value has already been included in the year it was produced.

**7. Which of the following is a bank?**

i) Post office saving banks (ii) LIC (iii) UTI (iv) IDBI.

Post office saving banks are not banks in the sense that even though they accept deposits from the public but do not advance loans to others.

(ii), (iii) and (iv) LIC, UTI and IDBI are not banks in the sense that even though they do not accept chequeable deposits but advance loans to others.

**8. State why businessmen mostly want to open current account in the bank?**

The business men mostly want to open current account in the bank because the deposits in current accounts are payable on demand. They can be drawn upon by cheque without any restriction. The banks offer overdraft facility on these deposits to the business men.

**9. Name the institution which acts as a custodian of nation's foreign exchange reserves?**

Central Bank is an institution which acts as custodian of nation's foreign exchange reserves.

**10. Why can the value of MPC be not greater than one?**

The value of MPC will not be greater than one because increment in consumption ( $\Delta C$ ) cannot be more than the corresponding increment in income ( $\Delta Y$ ), i.e.,  $\Delta C < \Delta Y$ .

**11. What is the value of MPC when MPS is zero?**

When  $MPS = 0$ ,  $MPC = 1 - 0 = 1$ .

**12. When disposable income rises from Rs. 1,000 to Rs. 1,100, savings rise by Rs. 30. Find out marginal propensity to save and marginal propensity to consume?**

$\Delta Y = 1,100 - 1,000 = 100$ ,  $\Delta S = 30$ ,  $MPS = \Delta S / \Delta Y = 30 / 100 = 0.30$

$1 - MPS = MPC$

i.e.,  $1 - 0.30 = 0.70 = MPC$ .

**13. Does full employment occur when  $AD = AS$  or  $S = I$ ?**

It is not necessary that full employment occur when  $AD = AS$  or  $S = I$ . It means that full employment may or may not occur at  $AD = AS$  or  $S = I$ .

**14. If in an economy intended investment is greater than intended savings, what is the effect of it on national income?**

If  $I > S$ , the level of national income expands.

**15. Why is tax not a capital receipt?**

Tax is not a capital receipt because it neither leads to creation of liability nor to reduction in assets. In fact, a tax is a revenue receipt.

**16. Why are the borrowings by the Government as capital receipts?**

Borrowings by the Government are capital receipts because they create liabilities or reduce assets. The Government is under obligation to return the amount along with interest.

**17. Why is repayment of loan a capital expenditure?**

Repayment of loan is treated as a capital expenditure because it reduces the liabilities of the Government.

**18. Why is recovery of loans treated as a capital receipt?**

Recovery of loans is treated as a capital receipt because it leads to decline in financial assets of the Government.

**19. Why is interest received categorized as revenue receipt?**

Interest received is a revenue receipt because it does not create any liability nor it leads to reduction in assets.

**20. Why are receipts from taxes categorized as revenue receipts?**

Receipts from taxes are categorized as revenue receipts because they do not create liabilities nor reduction in assets.

**21. In a government budget, primary deficit is Rs. 10,000 crores and interest payment is Rs. 8,000 crores. How much is the fiscal deficit?**

Primary deficit = Fiscal deficit – interest payments

=> Fiscal deficit = Primary deficit + Interest payments.

$$= 10,000 + 8,000$$

$$= 18,000 \text{ crores.}$$

**22. Ten US dollars are exchanged for five hundred Indian rupees. What is the exchange rate for Indian currency?**

$$\$1 = 500/10 = \text{Rs.}50, \text{ i.e., } \$1 = \text{Rs. } 50$$

**23. If \$9 are needed to buy £2, what is the exchange rate for USA dollar?**

$$£1 = 9/2 = \$4.5, \text{ i.e., } £1 = \$4.5.$$

**24. If the value of exports of goods of a country is Rs. 1,000 crores and the value of imports of goods is Rs. 1,200 crores, how much will be the trade balance ( or balance of trade )?**

Balance of trade = value of exports – value of imports

$$= 1,000 - 1,200.$$

$$= \text{Rs.} - 200 \text{ crores}$$

**25. A country's balance of trade is Rs. 75 crores. Value of imports of goods is Rs. 100 crores. How much is the value of exports of goods?**

Balance of trade = value of exports – value of imports

$$75 = \text{value of exports} - 100.$$

$$\text{i.e., Value of exports} = 100 + 75$$

$$= \text{Rs. } 175 \text{ crores.}$$

**26. A country's balance of trade is Rs.500 crores . Value of exports of goods is Rs. 650 crores. How much is the value of imports of goods?**

Balance of trade = Value of exports – Value of imports

$$500 = 650 - \text{value of imports}$$

$$\text{Value of imports} = 650 - 500$$

$$= \text{Rs. } 150 \text{ crores.}$$

**27. Differentiate between devaluation and depreciation?**

Devaluation means reduction in the external value of a country's currency as a conscious policy measure adopted by the Government of a country. In other words, we make our currency cheaper in terms of foreign currency. This makes our goods cheaper to foreign buyers and foreign goods costlier to our buyers. Hence exports increase, imports fall and the gap in trade balance becomes smaller. When a country suffers from continued deficit in its balance of payments, it may resort to devaluation of its currency with a view to encouraging exports and restricting imports and thus narrowing down or covering its trade gap and balance of payments deficit. It takes place in Fixed Exchange Rate System.

Depreciation of a currency means fall in value of domestic currency in terms of foreign currency. Example: if value of rupee in terms of US dollars falls, say from Rs. 45 to Rs. 50 per dollar, it will be a case of depreciation of Indian rupee because more rupees are required now to buy one US dollar. It occurs in Flexible Exchange Rate System.

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