

Economics 2017 (Outside Delhi)

SET I

Time allowed : 3 hours

Maximum marks : 100

SECTION—A

1. Any statement about demand for a good is considered complete only when the following is/are mentioned in it (Choose the correct alternative) : [1]

- (a) Price of the good
- (b) Quantity of the good
- (c) Period of time
- (d) All of the above

Answer : (a) Price of the good.

2. Demand for a good is termed inelastic through the expenditure approach when (Choose the correct alternative) [1]

- (a) Price of the good falls, expenditure on it rises
- (b) Price of the good falls, expenditure on it falls
- (c) Price of the good falls, expenditure on it remains unchanged
- (d) Price of the good rises, expenditure on it falls.

Answer : (c) Price of the good falls, expenditure on it remains unchanged.

3. Define indifference curve. [1]

Answer : Indifference curve is a diagrammatic presentation of an indifference set of a consumer. It is a locus of all such points which show different combinations of two commodities offering the same level of satisfaction to the consumer.

4. A seller cannot influence the market price under (Choose the correct alternative) [1]

- (a) Perfect competition
- (b) Monopoly
- (c) Monopolistic competition
- (d) All of the above

Answer : (a) Perfect competition.

5. State any one feature of monopolistic competition. [1]

Answer : Product differentiation is one of the main features of monopolistic competition.

6. Give the meaning and characteristics of production possibility frontier. [3]

Answer : PPF is a curve showing different possible combinations of two goods which can be produced with the available resources.

The main characteristics of PPF are :

- (a) PPF always slopes downward from left to right : PPF has a negative slope which implies that more than one good can be produced only by loss of another good.
- (b) PPF is concave to the origin : The PPF is concave to origin and shows the tendency of increasing MRT.

7. Explain the problem of "how to produce". [3]

Answer : 'How to produce' refers to the choice of technique of production. It has two categories:

- (1) **Labour-intensive technique :** It implies greater use of labour than capital. It promotes employment.
- (2) **Capital-intensive technique :** It implies greater use of capital than labour. It promotes efficiency and accelerates the pace of growth. The choice of technique depends on the type of product manufactured by a company. For e.g.--A food and beverage company can use hundreds of workers with little application of capital (machinery) or can use more machines with few workers in order to produce the desired quantity of biscuits and soft drinks.

8. Distinguish between 'increase in demand' and 'increase in quantity demanded' of a good.

OR

Explain the meaning of 'Budget set' and 'Budget line'.

Answer: Difference between 'increase in demand' and 'increase in quantity demanded' of a good is :

| Increase in demand | Increase in Quantity demanded |
|--|--|
| (1) Increase in demand refers to increase in quantity demanded due to change in other factors than the price of commodity that remains constant. | (1) It refers to increase in quantity demanded due to decrease in the price of the commodity when all other factors remain constant. |

| | |
|---|--|
| <p>(2) It leads to forward shifting of demand curve.</p> <p>(3) For example—</p> <p>In the above graph, price is constant at ₹10. But demand increases from A to B due to changes in the price of a commodity due to other factors.</p> | <p>(2) It leads to downward movement along the demand curve from left to right.</p> <p>(3) For example—</p> <p>In the above graph, demand is increasing from A to B due to changes in the price of a commodity from OP to OP1.</p> |
|---|--|

OR

'Budget set' refers to attainable combinations of a set of two goods, given prices of goods and income of the consumer. The budget set equation is :

$$P_1 X_1 + P_2 X_2 \leq Y$$

Where P_1 = Price of good 1 ; X_1 Quantity of good 1 ; P_2 Price of good 2 ; X_2 = Quantity of good 2

'Budget line' is a line showing different possible combinations of good 1 and good 2, which a consumer can buy, given his budget and the prices of good-1 and good-2. Anywhere on the budget line, a consumer is spending his entire income either on good 1 or on good 2 or on both good 1 and good 2.

9. Explain with the help of a numerical example, the meaning of diminishing marginal rate of substitution. [4]

Answer : Suppose a consumer consumes two goods - X and Y. He wants one more unit of X in exchange for some amount of Y. It is explained in the following schedule :

| Combination of goods X and Y | Marginal rate of substitution (MRS) |
|------------------------------|-------------------------------------|
| 8X + 20Y | — |
| 9X + 16Y | 4Y : 1X |
| 10X + 13Y | 3Y : 1X |

Since marginal utility of good X goes on falling with every increase in units of X, therefore, consumer will be willing to sacrifice lesser quantity of good Y for obtaining additional units of X.

Initially for getting an additional unit of X, consumer is willing to sacrifice $(20-16)=4$ units of Y. So MRS is $4Y : 1X$. When one more unit of X is acquired then $(16-13) = 3$ units of Y are sacrificed. MRS has fallen to $3Y : 1X$. The reason is, as more units of X are consumed, marginal utility from each successive unit of X goes on falling, this makes the consumer to sacrifice less units of Y to get additional unit of X.

Hence, we can say that marginal rate of substitution is always diminishing.

10. Define market supply. Explain the factor 'input prices' that can cause a change in supply.

OR

Give the behaviour of marginal product and total product as more and more units of only one input are employed while keeping other inputs as constant. [4]

Answer : Market supply is the total amount of a commodity that all the firms/producers in the industry are willing to sell at different possible prices of that commodity.

For example : The table is showing market supply. It is based on the assumption that there are only two firms (A and B) supplying Good-X in the market

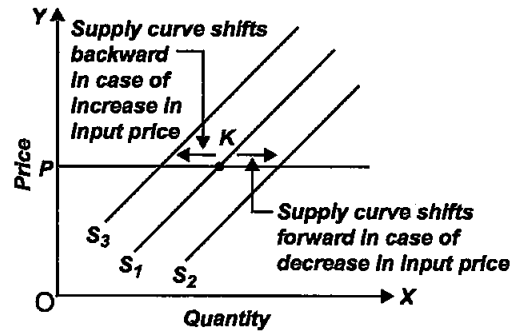
Market Supply Schedule

| P_x (Price of Good-x) (₹) | Q_x (firm 'A') (Units) | Q_x (firm 'B') (units) | Market supply (Units) |
|-----------------------------------|-----------------------------|-----------------------------|--------------------------|
| 5 | 0 | 0 | 0 |
| 10 | 10 | 5 | $10 + 5 = 15$ |
| 15 | 20 | 10 | $20 + 10 = 30$ |
| 20 | 30 | 15 | $30 + 15 = 45$ |

The above table shows the total market supply assuming only two firms in the market.

Effect of 'input prices' causing change in supply: Input price may increase or decrease. In case of increase in input price, cost of production tends to rise hence, producers will supply less

of the commodity at its existing price. It will cause the backward shifting of the supply curve. Opposite will happen in case of decrease in input price as cost of production tends to decline hence, more supply of the commodity will be given at the existing price of the commodity. In such case forward shifting of supply curve will take place.

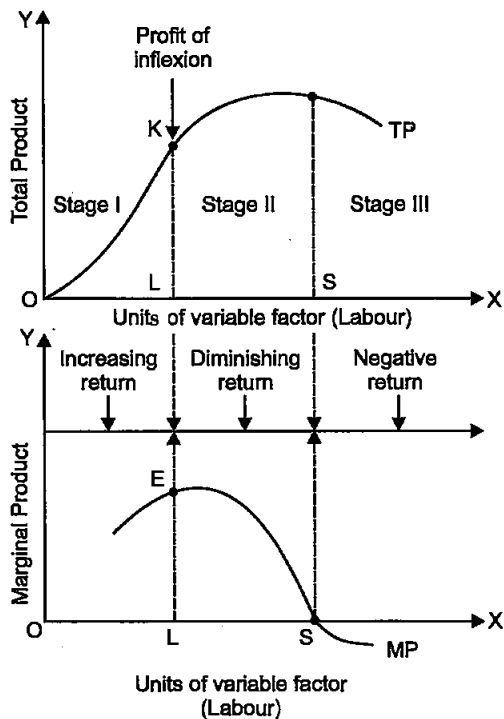


OR

Consider a situation when land is a fixed factor, labour is a variable factor and the farmer is producing wheat. Since land is a fixed factor, he can produce more of wheat only by using more of labour. As more labour is applied on a fixed piece of land, total productivity increases but at a diminishing rate. It occurs due to the operation of law of variable proportion. It can be understood by the following table :

Law of variable proportions

| Units of Land | Units of Labour | Total Product | Marginal Product | Remarks |
|---------------|-----------------|---------------|------------------|---|
| 1 | 1 | 2 | 2 | Increasing MP implying increasing returns to a factor |
| 1 | 2 | 5 | 3 | |
| 1 | 3 | 9 | 4 | |
| 1 | 4 | 12 | 3 | Diminishing MP implying diminishing returns to a factor |
| 1 | 5 | 14 | 2 | |
| 1 | 6 | 15 | 1 | Negative MP implying negative returns to a factor |
| 1 | 7 | 15 | 0 | |
| 1 | 8 | 14 | -1 | |



The above figure shows :

- (1) MP tends to rise till OL units of labour are used. This corresponds to point E on the MP curve. It shows increasing returns to a factor.
- (2) When MP is rising TP tends to rise at an increasing rate. This occurs till point K on the TP curve. This corresponds to the situation of increasing returns to a factor.
- (3) Beyond OL units of labour. MP tends to decline and TP increases only at diminishing rate. It occurs between E and S on MP curve and between K and T on TP curve. This is a situation of diminishing returns to a factor.
- (4) When employment of labour exceeds OS units, MP becomes negative. Accordingly, TP starts declining. This is a situation of negative returns to a factor, occurred beyond point T on TP curve and beyond S on MP curve.

11. Explain "perfect knowledge about the markets" feature of perfect competition. [4]

Answer : Perfect knowledge means that both the buyers and sellers have full knowledge about the prices and costs prevailing in the different parts of the market. All firms have equal access to technology and inputs. This ensures the same per unit cost of production by all the firms in the industry.

Implication of perfect knowledge : No firm is in a position to charge a different price and no buyer

will pay a higher price for the same product. As a result, uniform price prevails. Since, there is uniform price and uniform cost, all firms earn uniform profits because profit equals price-cost.

12. When the price of a good rises from ₹10 per unit to ₹12 per unit, its quantity demanded falls by 20 percent. Calculate its price elasticity of demand. How much would be the percentage change in its quantity demanded, if the price rises from ₹ 10 per unit ₹ 13 per unit ? [6]

Answer : Original Price (P) = ₹ 10 per unit

New price (P1) = ₹ 12 per unit

Change in Quantity demanded (ΔQ) = 20%

Price elasticity of demand (Ed) = ?

Change in prices (ΔP) = New price - Original price

$$₹ (12 - 10) = ₹ 2$$

$$\begin{aligned} \text{Percentage change in price} &= \frac{\text{Change in price}}{\text{Original price}} \times 100 \\ &= \frac{\Delta P}{P} \times 100 \\ &= \frac{2}{10} \times 100 \\ &= 20\% \end{aligned}$$

Price elasticity of demand

$$= \frac{\text{Percentage change in quantity demanded}}{\text{Percentage change in Price}}$$

$$Ed = \frac{20}{20}$$

$$Ed = 1$$

Now, further taking this elasticity of demand in another situation when price changes from ₹10 to ₹ 13 per unit

Percentage change in price

$$= \frac{\text{Change in price}}{\text{Original price}} \times 100$$

$$= \frac{13 - 10}{10} \times 100$$

$$= \frac{3}{10} \times 100 = 30\%$$

Price elasticity of demand

$$= \frac{\text{Percentage change in quantity demanded}}{\text{Percentage change in price}}$$

$$1 = \frac{\text{Percentage change in quantity demanded}}{30}$$

Percentage change in quantity demanded

$$= 30 \times 1$$

$$= 30\%$$

13. Complete the following table : [6]

| Output (units) | Average Fixed Cost (₹) | Marginal Cost (₹) | Average Variable Cost (₹) | Average Cost (₹) |
|----------------|------------------------|-------------------|---------------------------|------------------|
| 1 | 60 | 20 | — | — |
| 2 | — | — | 19 | — |
| 3 | 20 | — | 18 | — |
| 4 | — | 18 | — | — |
| 5 | 12 | — | — | 31 |

Answer:

| Output (units) | AFC (₹) | MC (₹) | AVC (₹) | AC (₹) |
|----------------|---------|--------|---------|--------|
| 1 | 60 | 20 | 20 | 80 |
| 2 | 30 | 18 | 19 | 49 |
| 3 | 20 | 16 | 18 | 38 |
| 4 | 15 | 18 | 18 | 33 |
| 5 | 12 | 23 | 19 | 31 |

14. From the following total cost and total revenue schedule of a firm, find out the level of output, using marginal cost and marginal revenue approach, at which the firm would be in equilibrium. Give reasons for your answer.

| Output (units) | Total Revenue (₹) | Total Cost (₹) |
|----------------|-------------------|----------------|
| 1 | 10 | 8 |
| 2 | 18 | 15 |
| 3 | 24 | 21 |
| 4 | 28 | 25 |
| 5 | 30 | 33 |

Answer :

| Output | TR (₹) | TC (₹) | MR | MC | Remark |
|--------|--------|--------|----|----|------------------|
| 1 | 10 | 8 | 10 | 8 | |
| 2 | 18 | 15 | 8 | 7 | |
| 3 | 24 | 21 | 6 | 6 | |
| 4 | 28 | 25 | 4 | 4 | = in equilibrium |
| 5 | 30 | 33 | 2 | 8 | |

The firm will be in equilibrium at output unit 4, where $MC = MR$ i.e. 4.

At this point, the two conditions of $MC = MR$ approach fulfills. These conditions are :

(i) MC should be equal to MR.

(ii) At the point of equilibrium, MC should be rising i.e. MC should rise just after the equilibrium unit.

Both these conditions are fulfilled at output unit 4. Where $MC = MR$ and MC is rising on the next unit than revenue. Hence, firm will be in equilibrium at output unit 4.

15. Distinguish between perfect oligopoly and Imperfect oligopoly. Also explain the "interdependence between the firms" feature of oligopoly.

OR

Explain the meaning of excess demand and excess supply with the help of a schedule. Explain their effect on equilibrium price. [6]

Answer : Difference between perfect oligopoly and imperfect oligopoly :

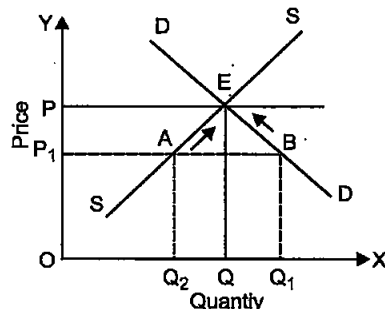
In an oligopoly market, when firms produce homogenous products, it is called perfect oligopoly whereas when firms produce differentiated products, it is called imperfect oligopoly.

It is rare to find perfect oligopoly type of situation. Examples : cement, steel, aluminium and chemical producing industries. While examples of imperfect oligopoly are : passenger cars, cigarettes and soft drinks.

Interdependence between the firms : There is an interdependence of firms for taking decision about price and output. Since there are a few firms, a change in price and output of a product by any firm is likely to influence the output and profit of rival firms whose reaction may prove counter productive. This makes the firms mutually dependent on each other, in case of decisions about price and output. For example, there is an interdependence of decision about price between pepsi and cola. If pepsi reduces price, cola-cola may do the same substantially.

OR

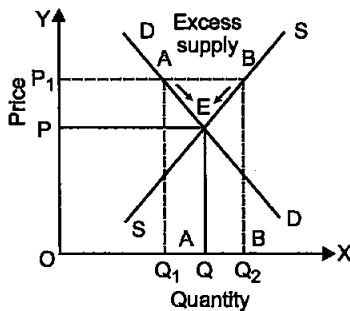
When there is excess demand : Excess demand refers to a situation where at a given price, quantity demanded exceeds quantity supplied. The situation of excess demand can be explained with the help of following graph and schedule :



In the given figure, OP is the equilibrium price and OP₁ is the market price. At OP₁ price quantity demanded is OQ and quantity supplied is Q₂. Thus there is an excess demand equal to AB = (OQ₁ - OQ₂). This will result in a competition among buyers. Price will rise leading to rise in supply and fall in demand as shown by arrows along DD and SS curves. This change will continue till price rises to OP which is the equilibrium price.

| Price | Quantity Demanded | Quantity Supplied |
|-------|-------------------|------------------------|
| 14 | 1 | 7 |
| 12 | 2 | 6 |
| 10 | 3 | 5 |
| 8 | 4 | 4 = Market Equilibrium |
| 6 | 5 | 3 |
| 4 | 6 | 2 |
| 2 | 7 | 1 |

When there is excess supply : Excess supply refers to a situation where quantity supplied exceeds quantity demanded. The situation of excess supply can be explained with help of the following graph :



In the above figure, OP is the equilibrium price and OP₁ is the market price. At OP₁, quantity supplied is OQ₂ and quantity demanded is Q₁. Thus there is an excess supply equal to AB = (OQ₂ - OQ₁). This will lead to competition among sellers. Price will fall leading to fall in supply and rise in demand as shown by arrows along DD and SS curves. Process of this change will continue till price falls to OP which is the equilibrium price.

SECTION—B

16. Demand deposits include (Choose the correct alternative) [1]
 (a) Saving account deposits and fixed deposits
 (b) Saving account deposits and current account deposits

- (c) Current account deposits and fixed deposits
 (d) All types of deposits

Answer : (b) Saving account deposits and current account deposits.

17. Define marginal propensity to consume. [1]

Answer : MPC is the ratio of change in consumption to change in income. Symbolically,

$$MPC = \frac{\Delta C}{\Delta Y}$$

Where, ΔC = change in consumption

ΔY = change in income

MPC = Marginal propensity to consume.

18. If the marginal propensity to consume is greater than marginal propensity to save, the value of the multiplier will be (Choose the correct alternative) [1]

- (a) greater than 2
 (b) less than 2
 (c) equal to 2
 (d) equal to 5

Ans : (d) equal to 5

19. Define Government budget. [1]

Answer : Government budget is a detailed statement of the estimates of government receipts and government expenditure during a financial year.

20. What is meant by depreciation of domestic currency? [1]

Answer : Depreciation of domestic currency means fall in the value of domestic currency in relation to foreign currency *i.e.*, a situation where exchange rate is determined by the market forces of supply and demand for foreign exchange in the international money market.

21. Explain with the help of an example, the basis of classifying goods into final goods and intermediate goods. [3]

Answer : The basis of classifying goods into final goods and intermediate goods is that whether the good is purchased for final use or for the use in further production.

(i) **Final goods :** All goods which are meant either for consumption by consumers or for investment by firms are called final goods. They are meant for final use and the final use of a product is only for consumption or investment. In other words, final goods are acquired for own use *i.e.* by consumers for satisfaction of their wants and by producers for capital formation. For examples,

biscuits, flour, clothes are final goods when purchased by a consumer for their personal use or for satisfaction of their wants. Machine bought by a household is final good but machine bought by a firm for its use in production is not a final good.

(ii) **Intermediate goods** : All goods which are used as raw material for further production of other goods, or for re-sale in the same year are known as intermediate goods. For example flour, milk, sugar, salt, fuel, etc., when purchased by a firm in order to prepare biscuits are intermediate goods. The cloth if purchased by a dress maker is also an intermediate good. Machine if purchased by a firm for resale in the same year is an intermediate good.

22. Explain "difficulty in storing wealth" problem faced in the barter system of exchange.

OR

Explain the "medium of exchange" function of money. ** [3]

Answer : In the barter system of exchange, it was difficult for the people to store wealth or generalise purchasing power for future use in the form of goods like cattle, wheat, potatoes and other perishable items, etc. Holding of stocks of such goods involved costly storage and deterioration.

23. Distinguish between direct taxes and indirect taxes. Give an example of each. [3]

Answer : Difference between direct and indirect taxes :

| Direct Tax | Indirect Tax |
|--|--|
| (1) When liability of paying a tax and the burden of that tax fall on the same person, the tax is called a direct tax. | (1) When liability of paying tax is on one person but the burden of that tax falls on other person. The tax is called an indirect tax. |
| (2) The burden of direct tax cannot be shifted on to the others. | (2) The burden of indirect tax can be shifted on to the others. |

| | |
|--|--|
| (3) Examples are-income tax, corporate tax, gift tax, etc. | (3) Examples are-sales tax, custom duty, service tax, etc. |
|--|--|

24. Explain the "bankers' bank" function of the central bank. [4]

OR

Explain the process of credit creation by commercial banks.

Answer : As a banker's bank, central bank works in a similar way as commercial banks deals with its customers. It accepts deposits from the commercial banks and offers them loans. The central bank also provides 'clearing house' facility to the commercial banks. It is a cheque clearing facility provided at one centre to all the banks. Central bank is the custodian of their cash reserves. Banks of the country are required to keep a certain percentage of their deposits with the central bank and in this way the central bank is the ultimate holder of the cash reserves of commercial banks.

OR

The process of credit creation by commercial bank can be easily understood by taking an example. Suppose a person, say X, deposits ₹ 2000, with a bank and the LRR is 10% which means the bank keeps only the minimum required ₹ 200 as cash reserve. The bank can use remaining amount ₹ 1800 (= 2000-200) for giving loan to someone. The bank lends ₹ 1800 to, say F, for this purpose and an account is opened in the name of Y and the amount is credited in his account. This is the first round of credit creation in the form of secondary deposit (₹ 1800) which equals 90% of the initial deposit. Now again from the deposit of Y, bank keeps 10% or LRR i.e. 180 and remaining ₹ 1620 is advanced to, say Z. The bank get, new demand deposit. This is the second round of credit creation till secondary deposit becomes zero. In the end, volume of total credit created it becomes multiple of initial deposit. The quantitative outcome is called money multiplier. In short, money (or credit) creation by commercial banks depends on two factors (i) amount of initial deposit and (ii) LRR. Symbolically :

$$\text{Total credit creation} = \text{Initial deposit} \times \frac{1}{\text{LRR}}$$

** Answer is not given due to change in present syllabus

25. An economy is in equilibrium. From the following data, calculate the marginal propensity to save : [4]

- (a) Income = 10,000
- (b) Autonomous consumption = 500
- (c) Consumption expenditure = 8,000

Answer : Applying the equation :

$$c = \bar{c} + by$$

Where, c = Consumption expenditure (8,000)

\bar{c} = Autonomous consumption (500)

b = MPC (marginal propensity to consume)

y = Income (10,000)

$$8,000 = 500 + b \times 10,000$$

$$8000 = 500 + 10,000b$$

$$8000 - 500 = 10,000b$$

$$7,500 = 10,000b$$

$$b = \frac{7,500}{10,000}$$

$$b = 0.75, \text{MPC} = 0.75$$

Now,

$$\text{MPS} + \text{MPC} = 1$$

$$\text{MPS} = 1 - \text{MPC}$$

$$= 1 - 0.75$$

$$= 0.25$$

Hence, the value of $\text{MPS} = 0.25$

26. Explain how government budget can be helpful in bringing economic stabilization in the economy. [4]

Answer : Government budget can be helpful in bringing economic stabilization in the economy. Economic instability occurs when there is frequent price fluctuations in the economy. Such price fluctuations can be controlled through budget by taxes, subsidies and expenditure. For instance, if there is the condition of inflation (continuous rise in prices), government can reduce its own expenditure, tax rates can be increased or subsidies can be withdrawn or reduced to control the expenditure on the part of consumer and producer both. While in the condition of depression characterised by falling output and prices, government can reduce taxes and grant subsidies to encourage spending by people.

27. Distinguish (a) between current account and capital account, and (b) between autonomous transactions and accommodating transactions

of balance of payments account. [6]

Answer : (a)

| Current Account BOP | Capital Account BOP |
|---|---|
| (1) It records exports and imports of goods and services and current transfers. | (1) It records all such transactions between residents of country and rest of the world which causes a change in the ownership of the assets. |
| (2) Transactions of current account does not affect asset liability status of the country in relation to the rest of the world. | (2) Transaction of capital account affect the asset liability status of the country in relation to the rest of the world. |
| (3) Current account transactions impact capital account transactions, Example : Deficit on current account often leads to borrowing. | (3) Capital account transactions impact current account transactions. Example : FDI leads to factor income to the rest of the world. |
| (4) Principal components of current account BOP are: (a) export and import of goods (b) export and import of services, and (c) current transfers | (4) Principal components of capital account BOP are: (a) borrowing, and (b) foreign investment |

(b)

| Autonomous transactions (BOP) | Accommodating transactions (BOP) |
|--|--|
| (1) Autonomous transactions refer to such BOP transactions which are undertaken for consideration of profit. | (1) Accommodating transactions are free from the considerations of profit. |
| (2) Autonomous items are the cause of BOP imbalance (BOP surplus or BOP deficit) | (2) Accommodating items are meant to restore BOP balance. |

| | |
|--|---|
| (3) Autonomous items may involve the movement of goods across the borders (like export and import of consumer goods or capital goods). | (3) Accommodating items do not involve the movement of goods across the borders. These items only involve the movement of official reserves with the RBI. |
| (4) Autonomous items are classified as 'above the line' items of BOP. | (4) Accommodating items are classified as 'below the line' items of BOP. |

28. Explain the precautions that should be taken while estimating national income by expenditure method. [6]

OR

Will the following be included in the domestic product of India? Give reasons for your answer.

- (a) Profits earned by foreign companies in India.
- (b) Salaries of Indians working in the Russian Embassy in India.
- (c) Profits earned by a branch of State Bank of India in Japan.

Answer : The following precautions need to be taken for correct estimation of national income by expenditure method :

- (1) To avoid double counting, expenditure on all intermediate goods and services is excluded. For example, purchase of vegetables by a restaurant, expenses on electricity by a factory.
- (2) Government expenditure on all transfer payments such as scholarship, unemployment allowance, pension, etc.
- (3) Expenditure on purchase of second-hand goods is excluded from national income because this type of expenditure is not on currently produced goods.
- (4) Expenditure on purchase of old shares/bonds or new shares/bonds, etc., is excluded because it is not the payment done for goods and services currently produced. It shows mere transfer of property from one person to another .
- (5) Imputed expenditure on own account out-

put (e.g.-owner occupying his house, self-consumed output by a farmer) should not be included.

OR

- (a) Profit earned by foreign companies in India : Yes, it is included in domestic income of India because profits are earned by the company within India's domestic territory irrespective of ownership of the company.
- (b) Salaries of Indians working in Russian embassy in India : No, it is not included in domestic product of India because Russian embassy in India is not a part of domestic territory of India (but a part of domestic territory of Russia).
- (c) Profits earned by a branch of State Bank of India in Japan : No, it is not included in domestic income of India because it is not earned in Indian domestic territory.

29. Calculate (a) National Income, and (b) Net National Disposable Income : ** [6]

(₹) in crores

| | |
|--------------------------------------|-------|
| (i) Compensation of employees | 2,000 |
| (ii) Rent | 400 |
| (iii) Profit | 900 |
| (iv) Dividend | 100 |
| (v) Interest | 500 |
| (vi) Mixed income of self-employed | 7,000 |
| (vii) Net factor income to abroad | 50 |
| (viii) Net exports | 60 |
| (ix) Net indirect taxes | 300 |
| (x) Depreciation | 150 |
| (xi) Net current transfers to abroad | 30 |

Answer : (a)

$$NI = NDP_{fc} + NFIA \text{ (Net factor income from abroad)}$$

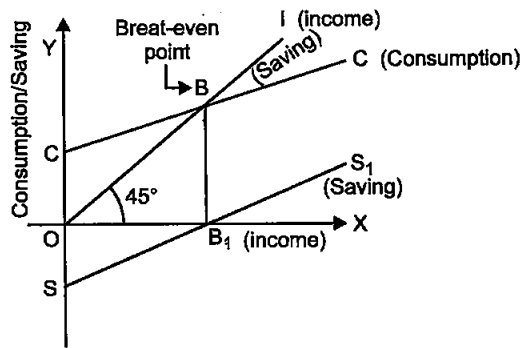
$$\begin{aligned}
 NDP_{fc} &= COE + \text{Mixed income} + \text{operating surplus} \\
 &= COE + MI + (\text{Rent} + \text{Royalty} + \text{Interest} + \text{Profit}) \\
 &= 2,000 + 7,000 + 400 + 500 + 900 \\
 &= ₹ 10,800 \text{ crores}
 \end{aligned}$$

$$\begin{aligned}
 NNP_{fc} \text{ or NI} &= NDP_{fc} - \text{Net factor income to abroad} \\
 &= 10,800 - 50 = 10,750 \text{ crore.}
 \end{aligned}$$

30. Given a consumption curve, outline the steps required to be taken in deriving a saving curve from it. Use diagram. [6]

** Answer is not given due to change in present syllabus

Answer :



In the above diagram :

CC = Consumption function

OI = 45° degree line showing income drawn from the origin O.

B = Breakeven point where consumption = income, i.e., a point where there is no saving.

Following are the steps used in drawing saving curve from consumption function:

- (1) Take a point B on consumption curve and from it draw a perpendicular on X-axis intersecting it on point B₁.
- (2) Take OS on Y-axis of lower part as equal to OC (OS = OC). This gives point S from where saving curve will start.
- (3) Join points S and B₁ and extend the straight line upward and thus we get saving curve SS₁.

In this way, saving curve is diagrammatically drawn from consumption curve.



Economics 2017 (Outside Delhi)

SET II

Time allowed : 3 hours

Maximum marks : 100

Note : Except for the following questions, all the remaining questions have been asked in previous sets.

7. Explain the problem of “for whom to produce.”[3]

Answer : The problem of ‘for whom to produce’ focuses on the distribution of the final goods and services produced. The distribution of the final goods and services is equal to the distribution of National Income among the factors of production such as land, labour, capital and entrepreneur. The economy needs to decide a mechanism of distributing the final goods and services among the different segments of population, to reduce the inequality of income. This problem is concerned about who gets more or who gets less? Which goods should be made available free or at low (nominal) price and to which segment?

13. Complete the following table : [6]

| Output (units) | Total Cost (₹) | Average Variable cost (₹) | Marginal Cost (₹) | Average Fixed Cost (₹) |
|----------------|----------------|---------------------------|-------------------|------------------------|
| 0 | 30 | | | |
| 1 | — | — | 25 | 30 |
| 2 | 78 | — | — | — |
| 3 | — | 23 | — | 10 |
| 4 | — | — | 23 | — |
| 5 | 150 | — | — | 6 |

Answer :

| Output (units) | Total Cost (₹) | Average Variable cost (₹) | Marginal Cost (₹) | Average Fixed Cost (₹) |
|----------------|----------------|---------------------------|-------------------|------------------------|
| 0 | 30 | | | |
| 1 | 55 | 25 | 25 | 30 |
| 2 | 78 | 24 | 23 | 15 |
| 3 | 99 | 23 | 21 | 10 |
| 4 | 122 | 23 | 23 | 7.5 |
| 5 | 150 | 24 | 28 | 6 |

14. From the following table, find out the level of output at which the producer will be in equilibrium (use marginal cost and marginal revenue approach). Give reasons for your answer. [6]

| Output (units) | 1 | 2 | 3 | 4 | 5 |
|-------------------|----|----|----|----|----|
| Total Revenue (₹) | 16 | 30 | 42 | 52 | 60 |
| Total Cost (₹) | 14 | 27 | 39 | 49 | 61 |

Answer : The equilibrium level of output will be 4 units. This is because at this point, the two con-

ditions of equilibrium (using MR-MC approach) are met. This can be seen as follows:

We are given the Total Revenue (TR) and Total Cost. From here, we can find Marginal Revenue (MR) and Marginal Cost (MC), as given in the following schedule.

| Units | Total Revenue (TR) | Marginal Revenue (MR) | Total Cost (TC) | Marginal Cost (MC) |
|-------|--------------------|-----------------------|-----------------|--------------------|
| 1 | 16 | – | 14 | – |
| 2 | 30 | 14 | 27 | 13 |
| 3 | 42 | 12 | 39 | 12 |
| 4 | 52 | 10 | 49 | 10 |
| 5 | 60 | 8 | 61 | 12 |

Here, as we can see, the first and other conditions of equilibrium through MR-MC approach are being met at unit 4. *i.e.*, First Condition : $MR = MC = 10$

Second Condition : MC is rising from this point and meets MR from below.

Thus, equilibrium output is 4 units.

21. Explain the circular flow of income. [3]

Answer : Circular flow of income refers to continuous circular flow of goods, services and income among different sectors of an economy. Flow of money is the aggregate value of goods and services either as factor payments or as expenditure on goods and services. It is circular since it has neither any beginning nor an end. It can be explained as household sector supply factor services and spend their income on consumption. The firms use these services in producing goods and other services. The households as owner of factors for production receive the payments in terms of money or reward for rendering productive services. The recipients of these incomes (*i.e.* households) in turn, spend their incomes on purchase of goods and services to satisfy their wants. In short, income is first generated by production units, then distributed among households for rendering productive services and ultimately comes back to production units by way of expenditure by the households.

Circular flow works on two principles :

- (1) In an exchange process, the seller (producer) receives the same amount which the buyer (or consumer) spends.
- (2) Goods and services flow in one direction

and the money paid to acquire them, flow in the reverse direction giving rise to a circular flow.

28. Explain the precautions that are taken while estimating national income by value added method. [6]

OR

Will the following be included in the national income of India? Give reasons for your answer.

- (a) Financial assistance to flood victims
- (b) Profits earned by the branches of a foreign bank in India
- (c) Salaries of Indians working in the American Embassy in India.

Answer : Precautions that are taken while estimating national income by value added method are :

- (1) Imputed rent of owner-occupied houses be included because all houses have rental value irrespective of its use by self or tenant.
- (2) Imputed value of goods and services produced for self-consumption or for free distribution should be included.
- (3) Only value added and not value of output by production units should be included.
- (4) Value of own-account production of fixed assets by enterprises, government and the households should be included.
- (5) The value of sale and purchase of second-hand goods should be excluded.
- (6) Sale of bonds by a company should also be excluded since it is merely a financial transaction which does not contribute directly to the flow of goods and services.

OR

- (a) **Financial assistance to flood victims :** This will not be included in the national income since it is a part of transfer payment.
- (b) **Profits earned by the branches of a foreign bank in India :** This is not to be included in the national income of India since it is earned by a foreign bank.
- (c) **Salaries of Indians working in the American Embassy in India :** It is included in national income of India since Indian employees of American embassy are the normal residents of India.

29. Calculate the (a) Net National Product at market price, and (b) Gross National Disposable Income : ** [6]

** Answer is not given due to change in present syllabus

Answer :

| | |
|-------------------------------------|---------------|
| | (₹ in crores) |
| (i) Mixed income of self-employed | 8,000 |
| (ii) Depreciation | 200 |
| (iii) Profit | 1,000 |
| (iv) Rent | 600 |
| (v) Interest | 700 |
| (vi) Compensation of employees | 3,000 |
| (vii) Net indirect taxes | 500 |
| (viii) Net factor income to abroad | 60 |
| (ix) Net exports | (-) 50 |
| (x) Net current transfers to abroad | 20 |

Answer:

(a) $NNP_{mp} = \text{Net national product at market price}$

$$NDP_{fc} = COE + MI + OS \text{ (Rent + interest + profit)}$$

$$= (vi) + (i) + (iv) + (v) + (iii)$$

$$= 3,000 + 8,000 + 600 + 700 + 1,000$$

$$= ₹ 13,300 \text{ crores}$$

$$NNP_{mp} = NDP_{fc} - (viii) + (vii)$$

$$= ₹ 13,300 - 60 + 500$$

$$= ₹ 13,740 \text{ crores.}$$

Economics 2017 (Outside Delhi)

SET III

Time allowed : 3 hours

Maximum marks : 100

Note : Except for the following questions, all the remaining questions have been asked in previous sets.

SECTION—A

7. Explain the problem of "what to produce". [3]

Answer : The problem of what to produce means which goods and services and in what quantities are to be produced by an economy. We can produce a number of commodities with our limited resources, for example, the choice can be between consumer goods and capital goods. Within consumer goods, it is necessary to decide whether to produce luxuries or necessities. More of one commodity can be produced only at the cost of another. The guiding principle while choosing goods and services, is to obtain maximum utility.

13. Complete the following table : [6]

| Output (units) | Average Fixed Cost (₹) | Average Variable Cost (₹) | Marginal Cost (₹) | Total Cost (₹) |
|----------------|------------------------|---------------------------|-------------------|----------------|
| 1 | 120 | 40 | — | — |
| 2 | 60 | 56 | — | 232 |
| 3 | — | 54 | — | — |
| 4 | 30 | — | 54 | — |
| 5 | — | — | — | — |

Answer:

| Output (units) | AFC (₹) | AVC (₹) | MC (₹) | TC (₹) |
|----------------|---------|---------|--------|--------|
| 1 | 120 | 40 | — | 160 |
| 2 | 60 | 56 | 72 | 232 |
| 3 | 40 | 54 | 50 | 282 |
| 4 | 30 | 54 | 54 | 336 |
| 5 | — | — | — | — |

14. From the following data find out the level of output that will give the producer maximum profit (use marginal cost and marginal revenue approach). Give reasons for your answer. [6]

| Output (units) | 1 | 2 | 3 | 4 | 5 |
|-------------------|----|----|----|----|----|
| Total Cost (₹) | 9 | 17 | 24 | 29 | 36 |
| Total Revenue (₹) | 11 | 20 | 27 | 32 | 35 |

Answer :

| Output (Units) | Total cost (₹) | Total Revenue (₹) | MC (₹) | MR (₹) | Profit (TR-TC) | Remark |
|----------------|----------------|-------------------|--------|--------|----------------|-----------------------------|
| 1 | 9 | 11 | 9 | 11 | 2 | |
| 2 | 17 | 20 | 8 | 9 | 3 | |
| 3 | 24 | 27 | 7 | 7 | 3 | |
| 4 | 29 | 32 | 5 | 5 | 3 | It is the equilibrium point |
| 5 | 36 | 35 | 7 | 3 | -1 | |

The producer will get the maximum profit at the point where firm is in equilibrium. From the above data, it is clear that firm is in equilibrium at unit 4 where, $MC=MR$. i.e. 5. At this point the two conditions of $MC=MR$ approach fulfills. These conditions are :

- (i) MC should be equal to MR .
- (ii) At the point of equilibrium. MC should be rising i.e., MC should be rising just after the equilibrium point. Both these conditions are fulfilled at output unit 4. Where, $MC = MR$ and MC is rising on the next unit more than MR . Hence, firm will be in equilibrium at output unit 4.

SECTION—B

16. Define revenue deficit. [1]

Answer : Revenue deficit is the excess of revenue expenditure over revenue receipt. Symbolically, it is represented as Revenue deficit = Revenue expenditure–Revenue receipt.

20. Define marginal propensity to save. [1]

Answer : Marginal propensity to save (MPS) is the ratio of change in saving to change in income. It is shown as :

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

Where, ΔS = change in saving

ΔY = change in income

21. Distinguish between stocks and flows. Give an example of each. [2]

Answer :

| Stock | Flow |
|--|---|
| (1) Stock refers to the value of a variable at a point of time. | (1) Flow refers to the value of a variable during a period of time. |
| (2) It is measured at a specific point of time. | (2) It is measured per hour, per month or per year. |
| (3) Stock impacts the flow. Greater the stock of capital, greater is the flow of goods and services. | (3) Flow impacts the stock, greater the flow of income, greater is the stock of wealth with the people. |
| (4) Example : Capital and quantity of money. | (4) Example : Export and imports. |

26. What are non-debt creating capital receipts ? Give two examples of such receipts. [4]

Answer : Non-debt creating capital receipts are the receipts which do not create any liability of repayment on the government rather it makes only addition to the existing capital account. For example recovery of loans, proceeds from sale of public enterprises (i.e. disinvestment etc.). These do not give rise to debt.

29. Calculate the (a) Gross National Product at market price, and (b) Net National Disposable Income : ** [6]

(₹ in crores)

| | |
|---|-------|
| (i) Compensation of employees | 2,500 |
| (ii) Profit | 700 |
| (iii) Mixed income of self-employed | 7,500 |
| (iv) Government final consumption expenditure | 3,000 |
| (v) Rent | 400 |
| (vi) Interest | 350 |
| (vii) Net factor income from abroad | 50 |
| (viii) Net current transfers to abroad | 100 |
| (ix) Net indirect taxes | 150 |
| (x) Depreciation | 70 |
| (xi) Net exports | 40 |

Answer :

(a) $GNP_{mp} = ?$

$$NDP_{fc} = COE + MI + OS \text{ (Rent + profit + interest)}$$

$$= (i) + (iii) + (v) + (ii) + (vi)$$

$$= 2500 + 7500 + 400 + 700 + 350$$

$$= ₹ 11,450 \text{ crores}$$

$$NNP_{mp} = NDP_{FC} + NFIA + \text{Net indirect tax.}$$

$$= NDP_{FC} + (vii) + (ix)$$

$$= 11,450 + 50 + 150$$

$$= ₹ 11,650 \text{ crores}$$

$$GNP_{mp} = NNP_{mp} + \text{Depreciation}$$

$$= NNP_{mp} + (x)$$

$$= 11,650 + 70$$

$$= ₹ 11,720 \text{ crores.}$$



** Answer is not given due to change in present syllabus

Economics 2017 (Delhi)

SET I

Time allowed : 3 hours

Maximum marks : 100

SECTION—A

1. The demand of commodity when measured through the expenditure approach is inelastic. A fall in its price will result in : (Choose the correct alternative) [1]

- (a) no change in expenditure on it.
- (b) increase in expenditure on it.
- (c) decrease in expenditure on it.
- (d) any one of the above.

Answer : (c) decrease in expenditure on it.

2. As we move along a downward sloping straight line demand curve from left to right, price elasticity of demand: (Choose the correct alternative) [1]

- (a) remain unchanged
- (b) goes on falling
- (c) goes on rising
- (d) falls initially then rises

Answer : (b) goes on falling.

3. Define market demand. [1]

Answer : Market demand refers to the sum total of individual demands at a given price during a period of time.

4. Average revenue and price are always equal under : (choose the correct alternative) [1]

- (a) perfect competition only
- (b) monopolistic competition only
- (c) monopoly only
- (d) all market forms

Answer : (d) all market forms.

5. State any one feature of oligopoly. [1]

Ans : Oligopoly has few firms that makes the large majority of market share.

6. Distinguish between micro-economics and macro-economics. [3]

Answer :

| Micro-economics | Macro-economics |
|---|--|
| (a) Studies about individual economic units like households, firms, consumers, etc. | It studies about an economy as a whole. |
| (b) It deals with how consumers can make their decisions depending on their given budget and other variables. | It deals with how different economic sectors can make their decisions. |

| | |
|---|---|
| (c) It uses the method of partial equilibrium, i.e., equilibrium in one market. | It uses the method of general equilibrium, i.e., equilibrium in all markets of an economy as a whole. |
|---|---|

7. State the meaning and properties of production possibilities frontier. [3]

Answer : Production possibilities frontier refers to the frontier which shows the production combination of commodities by available resources and techniques.

Properties of production possibilities frontier :

- (a) **Concave to the origin** : PPF is concave to the origin as to increase one additional unit of output, more and more units of another good is sacrificed.
- (b) **Downward sloping from left to right** : PPF is downward sloping from left to right because more and more units of good are sacrificed to gain one additional unit of another good.

8. Show that demand of a commodity is inversely related to its price. Explain with the help of utility analysis. [3]

OR

Why is an indifference curve negatively sloped? Explain.

Answer : Demand refers to the quantity which a consumer is willing to purchase through the given income of the consumer during a specific period of time. The demand of a commodity is inversely related to its price. If the price of a commodity increases, then the demand of it decreases. On the contrary, if the price of a commodity decreases then the demand of it increases.

This happens because of law of marginal utility. As more and more units of a good are consumed, MU derived from that commodity tends to diminish. As a result, demand of a commodity is inversely related to its price.

OR

Indifference curve refers to the curve showing consumption combinations of two commodities which yield the same level of satisfaction to the consumer.

An indifference curve is negatively sloped because :

If the quantity of one good is decreased then the quantity of other good will increase. It means that with the additional consumption of one

commodity, a consumer has to sacrifice less and less units of other commodity. This slope of indifference curve is also called Marginal Rate of Substitution of Good X and Good Y, denoted as

$$MRS_{xy} = \frac{\Delta X}{\Delta Y}$$

9. Explain the conditions of consumer's equilibrium under indifference curve approach. [4]

Answer : Intensity of desire of a commodity, tends to decrease as more and more units of a commodity are consumed. In other words, successive units of consumption offer less satisfaction. It is considered as the law of diminishing marginal rate of substitution.

In other words, it is a ratio of number of units of goods sacrificed to produce one additional unit of other goods by substituting the resources.

For ex :

| Good 1 | Good 2 | MRS |
|--------|--------|-----|
| 1 | 10 | - |
| 2 | 7 | 3 |
| 3 | 5 | 2 |
| 4 | 4 | 1 |

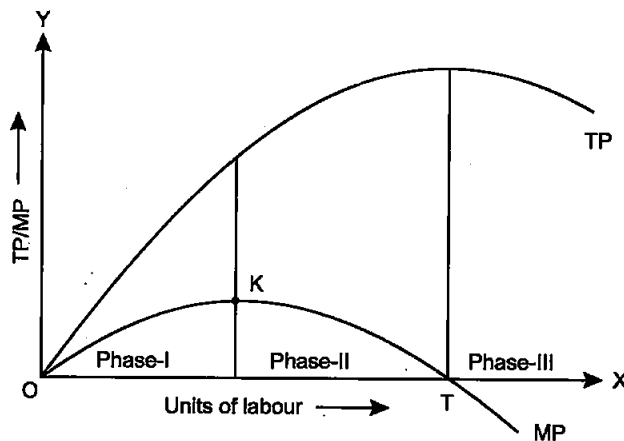
10. State different phases of the law of variable proportions on the basis of total product. Use diagram. [4]

OR

Explain the geometric method of measuring price elasticity of supply. Use diagram.

Answer : Law of Variable Proportion is enforced during short-run. It states that as more variable factors are used with the fixed factors the marginal product of that factor will decrease. So, a stage will ultimately come when MP of variable factors starts declining.

| Units of Labour | TP (Units) | MP (Units) |
|-----------------|------------|------------|
| 1 | 2 | 2 |
| 2 | 5 | 3 |
| 3 | 9 | 4 |
| 4 | 12 | 3 |
| 5 | 14 | 2 |
| 6 | 15 | 1 |
| 7 | 15 | 0 |
| 8 | 14 | -1 |



According to the schedule and figure from origin to point K, TP is increasing at increasing rate and MP is also increasing.

From point K to T, MP is diminishing while TP is increasing at diminishing rate.

At point T, MP is zero and TP is optimum.

Beyond point T, TP starts falling while MP becomes negative.

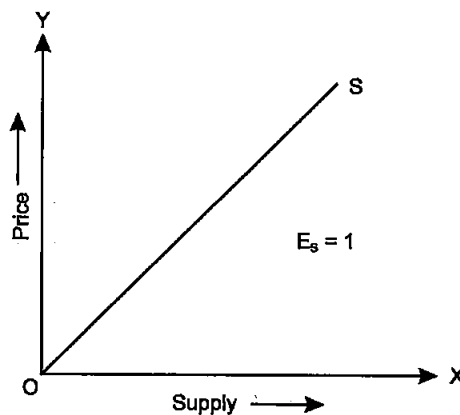
OR

Price elasticity of supply refers to the proportionate relationship between the percentage change in quantity supplied and percentage change in price.

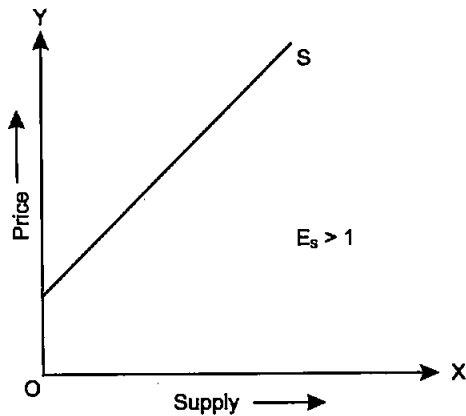
According to Geometric Method, elasticity of supply depends on the origin of supply curve.

Therefore, elasticity of supply should have three situations :

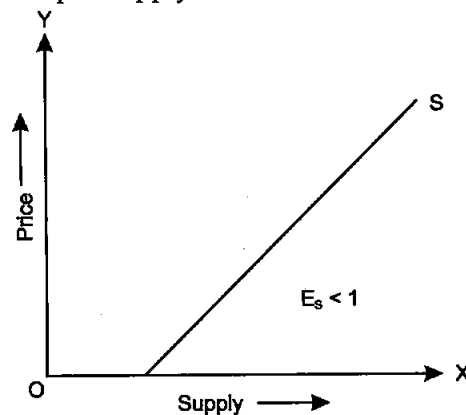
- (a) $E_s = 1$
 - (b) $E_s > 1$
 - (c) $E_s < 1$
- (a) $E_s = 1 \Rightarrow$ When a straight line positively sloped supply curve starts from the point of origin.



- (b) $E_s > 1 \Rightarrow$ When a straight line positively sloped supply curve starts from Y-axis.



(c) $E_s < 1 \Rightarrow$ When a straight line positively sloped supply curve starts from X-axis.



11. Explain the 'free entry and exit of firms' feature of monopolistic competition. [4]

Answer : Monopolistic competition is a form of market in which large number of sellers sell different kinds of products. There is a difference in their trade mark, brand name, packaging, etc. The commodities produced by each firm are close substitutes of one another.

The new firms can enter into a market and the existing firms can leave the market as per their own willingness but sometimes, they face a monopolist restriction *i.e.*, Cartel. There are neither abnormal profits nor any abnormal losses to a firm in the long run. This feature is important as all the firms are able to earn enough profit to continue their production. But entry in monopolistic competition is not so easy and free like perfect competition.

12. When price of a commodity X falls by 10 percent, its demand rises from 150 units to 180 units. Calculate its price elasticity of demand. How much should be the percentage fall in its price so that its demand rises from 150 to 210 units? [6]

Answer : Percentage change in Price = (-) 10%

$$Q = 150 \text{ units}$$

$$Q_1 = 180 \text{ units.}$$

$$E_d = (-) \frac{\% \Delta Q_d}{\% \Delta P} = \frac{(-) \frac{30}{150} \times 100}{10}$$

$$E_d = (-) \frac{20}{10} = (-) 2$$

And, if $E_d = 2,$

$$Q = 150 \text{ units, } Q_2 = 210 \text{ units}$$

% change in quantity demanded

$$= \frac{210 - 150}{150} \times 100$$

$$= \frac{60}{150} \times 100 = 40\%$$

$$E_d = (-) \frac{40}{x} \%$$

$$2 = (-) \frac{40}{x} \%$$

$$2x = (-) 40 \%$$

$$x = (-) \frac{40\%}{2}$$

$$E_d = x = -20 \%$$

Therefore, percentage fall in price will be 20%.

13. Complete the following table : [6]

| Output units | Total cost ₹ | Average variable cost ₹ | Marginal cost ₹ | Average fixed cost ₹ |
|--------------|--------------|-------------------------|-----------------|----------------------|
| 0 | 30 | | | |
| 1 | - | - | 20 | - |
| 2 | 68 | - | - | - |
| 3 | 84 | 18 | - | - |
| 4 | - | - | 18 | - |
| 5 | 125 | 19 | - | 6 |

Answer :

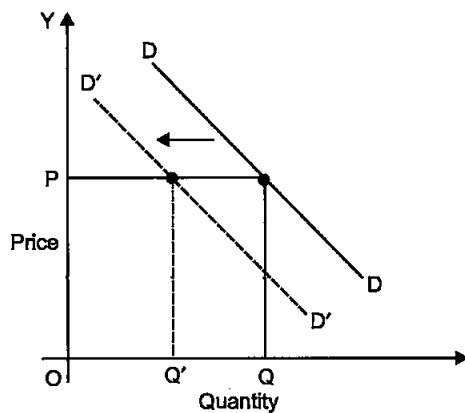
| Output units | Total cost ₹ | Average variable cost ₹ | Marginal cost ₹ | Average fixed cost ₹ |
|--------------|--------------|-------------------------|-----------------|----------------------|
| 0 | 30 | - | - | - |
| 1 | 50 | 20 | 20 | 30 |
| 2 | 68 | 19 | 18 | 15 |
| 3 | 84 | 18 | 16 | 10 |
| 4 | 102 | 10 | 18 | 7.5 |
| 5 | 125 | 19 | 23 | 6 |

14. Good Y is a substitute of good X. The price of Y falls. Explain the chain of effects of this change in the market of X. [6]

OR

Explain the chain of effects of excess supply of a good on its equilibrium price.

Answer : Substitute goods refer to goods which can be consumed instead of each other. For example, tea and coffee are substitute goods. If X and Y are substitute goods, then a fall in the price of good Y will lead to a fall in the demand of good X. This is because with a fall in the price of good Y, it will become cheaper in comparison to good X, and the demand for good Y will increase and that of good X will fall.



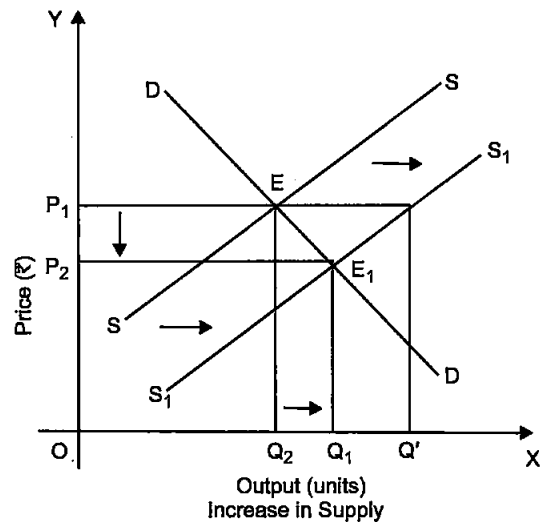
According to the diagram, DD is the initial demand curve for good X. At price OP, OQ quantity of good X is demanded. With a fall in the price of good Y, the demand for good X falls. Accordingly, the demand curve for good X shifts parallelly leftwards to D'D'. Here, even at the existing price OP, the quantity demanded for good X falls to OQ'.

Consider DD to be the initial demand curve and SS to be the supply curve of the market. Market equilibrium is achieved at Point E, where the demand and supply curves intersect each other. Therefore, the equilibrium price is OP, and the equilibrium quantity demanded is OQ₁. When there is change in other factors than price, there will be rise in the supply of goods. There will

Answer :

| Output | AR (₹) | TC (₹) | MR | MC | |
|--------|--------|--------|----|----|-------------|
| 1 | 12 | 12 | 12 | 12 | |
| 2 | 12 | 22 | 12 | 10 | |
| 3 | 12 | 30 | 12 | 12 | |
| 4 | 12 | 40 | 12 | 12 | |
| 5 | 12 | 52 | 12 | 12 | |
| 6 | 12 | 66 | 12 | 12 | Equilibrium |

be a shift in the supply curve towards the right to S₁S₁ with an increase in the supply, and the demand curve DD will remain the same. This implies that there will be a situation of excess supply.



In the above diagram, there is an excess supply of OQ₁ to OQ'.

Units of output are high at the initial price OP₁. There by, the producers will tend to reduce the price of the output to increase the sale in the market. Profit margin of the firm will come down and slowly some of the firms will tend to quit the market. Because of this, the market supply will decline to OQ₂ level of output and the price of the output also gets reduce to the point OP₂. Now, the new market equilibrium will be at Point E₁, where the new supply curve S₁S₁ intersects the demand curve DD.

15. Given below is the cost schedule of a product produced by a firm. The market price per unit of the product at all levels of output is ₹ 12. Using marginal cost and marginal revenue approach, find out the level of equilibrium output. Give reasons for your answer : [6]

| Output (Units) | 1 | 2 | 3 | 4 | 5 | 6 |
|------------------|----|----|----|----|------|----|
| Average Cost (₹) | 12 | 11 | 10 | 10 | 10.4 | 11 |

At 5th unit of output, the producer will be in equilibrium because at this unit, MR is equal to MC and MC curve cuts MR from below.

SECTION-B

16. The ratio of total deposits that a commercial bank has to keep with Reserve Bank of India is called (choose the correct alternative) [1]

- (a) Statutory liquidity ratio
- (b) Deposit ratio
- (c) Cash reserve ratio
- (d) Legal reserve ratio

Answer : (c) Cash reserve ratio.

17. Aggregate demand can be increased by : (choose the correct alternative) [1]

- (a) Increasing bank rate
- (b) Selling government securities by Reserve Bank of India
- (c) Increasing cash reserve ratio
- (d) None of the above

Answer : (d) None of the above.

18. Give the meaning of involuntary unemployment. [1]

Answer : Involuntary unemployment refers to the situation of unemployment when a person is willing to work but does not get any work.

19. What is primary deficit ? [1]

Answer : Primary deficit indicate the amount of borrowings required by the government to meet the expenditure other than interest payment.

20. Give the meaning of balance of payments. [1]

Answer : Balance of Payments refers to the accounting statement that provides a systematic record of all the economic transactions between residents of a country and the rest of the world in a given period of time.

21. Distinguish between final goods and intermediate goods. Give an example of each. [3]

Answer : Final Goods

- (a) These are those goods which are either used for consumption or for investment purpose.
- (b) They are included in both national and domestic income.
- (c) For e.g., milk purchased by households.

Intermediate Goods

- (a) These goods are those goods which are used either for resale or for further production in

the same year.

- (b) They are neither included in national income nor in domestic income.
- (c) For e.g. milk used in dairy for resale.

22. Explain the store of value function of money. ** [3]

OR

State the meaning and components of money supply.

Answer : Money supply refers to the total value of money held by public at a particular point of time.

Components of Money Supply

(a) M_1 = It is the first and basic measure of money supply.

M_1 = Currency and coins with Public + Demand deposits of commercial banks + Other deposits.

(b) M_2 = It is the broader concept.

M_2 = M_1 + Saving deposits with Post Office Savings Banks

(c) M_3 = Broader concept

M_3 = M_1 + Net time deposits with banks.

(d) M_4 = M_3 + Total deposits with post office savings bank (Excluding NSC).

23. Explain the basis of classifying taxes into direct and indirect tax. Give examples. [3]

Answer : The basis of classifying taxes into direct and indirect tax is whether the burden of the tax is shiftable to others or not. If it is not shiftable, i.e., when liability to pay taxes and the burden falls on the same person, it is a direct tax. And when the burden of a tax is shiftable i.e., liability to pay taxes falls on some person and burden on the other, known as indirect taxes.

Examples of direct taxes are : Income tax, corporate tax whereas, sales tax and service tax are the examples of indirect tax.

24. Explain 'banker to the government' function of the central bank. [4]

OR

Explain the role of reverse repo rate in controlling money supply.

Answer : The Reserve Bank of India acts as a Banker, agent and a financial advisor to the Central Government.

As a banker, it carries out all the banking business of the Government as :

** Answer is not given due to change in present syllabus

- (a) It maintains a current account for keeping their cash balances.
- (b) It accepts receipts and makes payments for the Government and carries out exchange and other banking operations.
- (c) It also gives loans and advances to the Government.

OR

Reverse Repo Rate is the rate at which RBI borrows money from commercial banks.

- (a) RBI makes use of this tool when it feels that there is an excess money supply in the banking system.
- (b) Banks are always happy to lend money to RBI as there money is in safe hands with a good interest.

25. Explain how government budget can be used to influence distribution of income ? [4]

Answer : Government budget is an annual statement, showing estimation of receipts and expenditure during a fiscal year. Government budget would influence the distribution of income when, Government will spend less to control the level of income in the economy. On the contrary, it will spend more to decrease the level of income in the economy.

26. An economy is in equilibrium. From the following data about an economy, calculate autonomous consumption. [4]

- (a) Income = 5000
- (b) Marginal propensity to save = 0.2
- (c) Investment expenditure = 800

Answer :

Given that, Income (y) = 5000

Marginal Propensity to save (s) = 0.2

Therefore, marginal propensity to consume

$$= 1 - \text{MPS}$$

$$= 1 - 0.2 = 0.8$$

∴ $Y = C + by + I$

⇒ $5000 = C + 0.8 \times 5000 + 800$

⇒ $5000 = C + 4000 + 800$

⇒ $5000 = C + 4800$

⇒ $5000 - 4800 = C$

⇒ $200 = C$

⇒ Autonomous Consumption = 200

27. Why does the demand for foreign currency fall and supply rises when its price rises ? Explain. [6]

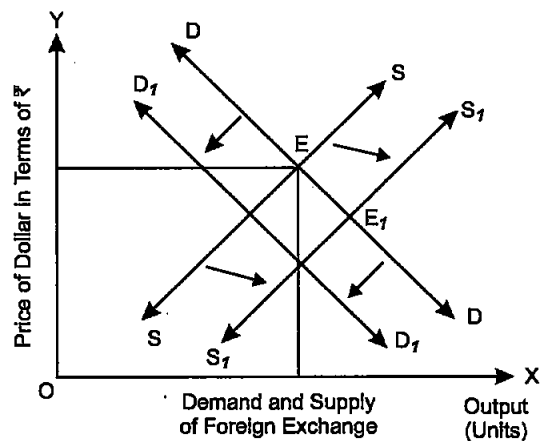
Answer : Demand for foreign currency, comes from the people who need it to make payment in foreign currency.

Supply of foreign currency comes from the people who receive it due to following reasons :

- (a) Exports of goods and services
- (b) Foreign Investment
- (c) Speculations

Reasons for rise in supply :

- (i) When the price of a foreign currency rises, domestic goods become relatively cheaper. It induces the foreign country to increase their imports from the domestic country. As a result, supply of foreign currency rises. For e.g., if price of U.S dollar rises from ₹ 45 to ₹ 50, then exports to USA will increase as Indian goods will become cheaper. It will raise the supply of U.S. dollars.
- (ii) When price of a foreign currency rises, supply of foreign currency rises as people want to make gains from speculative activities.



28. Explain 'non-monetary exchanges' as a limitation of using gross domestic product as an index of welfare of a country. [6]

OR

How will you treat the following while estimating domestic product of a country ?

Give reasons for your answer :

- (a) Profits earned by branches of country's bank in other countries
- (b) Gifts given by an employer to his employees on independence day
- (c) Purchase of goods by foreign tourists

Answer : Many activities in an economy are not evaluated in monetary terms, for e.g., Non-market transactions like services of house wife, kitchen gardening, etc. are not included in GDP due to non-availability of data. It is difficult

to ascertain their market value as they are not rendered for the purpose of earning income. Though these services are rendered for the development of a child and welfare of the family, it is not included in the gross national product. Thus, non-monetary exchanges is a limitation of using gross domestic product as an index of welfare of a country.

OR

- (a) Not included in domestic income as it is earned outside the domestic territory of the country.
- (b) Not included as it is a transfer payment.
- (c) Included as the expenditure is done within the domestic territory.

29. Calculate (a) net domestic product at factor cost and (b) gross national disposable income : **

| | | ₹ in crore |
|--------|--|------------|
| (i) | Private final Consumption Expenditure | 8000 |
| (ii) | Government final Consumption Expenditure | 1000 |
| (iii) | Exports | 70 |
| (iv) | Imports | 120 |
| (v) | Consumption of fixed capital | 60 |
| (vi) | Gross domestic fixed capital formation | 500 |
| (vii) | Change in stock | 100 |
| (viii) | Factor income to abroad | 40 |
| (ix) | Factor income from abroad | 90 |
| (x) | Indirect taxes | 700 |
| (xi) | Subsidies | 50 |
| (xii) | Net current transfer to abroad | (-) 30 |

Answer : (a) $NDPF_C = (i) + (ii) + (vi + vii) + (iii - iv) - (v) - (x) + (xi)$

$$= 8000 + 1000 + (500 + 100) + (70 - 120) - 60 - 700 + 50$$

$$= 9000 + 600 + (-50) - 60 - 650$$

$$= 9600 - 50 - 710$$

$$= 9600 - 760$$

$$= \mathbf{8840 \text{ Crores}}$$

30. Assuming that increase in investment is ₹ 1000 crore and marginal propensity to consume is 0.9. Explain the working of multiplier. [6]

Answer : Given that

Value of MPC = 0.9

Initial increase in investment = ₹ 1000 crore

So, every increase of ₹ 1 in the income, 0.9 part of the increased income will be consumed by people.

Consumption = ₹ 0.90

Saving = ₹ 0.10

It is given that initial increase in investment of ₹ 1000 will lead to change in the income by ₹ 1000 in the first round. As MPC is 0.9 so people will consume 0.9 of the increased income i.e., ₹ 900 there by saving ₹ 100. In the next round due to increase in the consumption expenditure by ₹ 900 there will be an increase in income by ₹ 900. Then people will again spend the increased income i.e., ₹ 810 and save the rest part of the income ₹ 90. similarly, this process will continue and the income will go on increasing as a result of the increase in consumption. The total change in the income is ₹ 10,000 and the change in the investment will be ₹ 1,000.



Economics 2017 (Delhi)

SET II

Time allowed : 3 hours

Maximum marks : 100

Note : Except for the following questions, all the remaining questions have been asked in previous sets.

6. Explain the problem of 'What to produce'. [3]
Answer : What to produce refers to the most important central problem. There are two

** Answer is not given due to change in present syllabus

types of commodities which a consumer has to produce :

- (1) War – Time commodities
- (2) Peace – Time commodities

An economy has to decide from these two commodities.

9. A consumer consumes only two goods : Explain the conditions of consumer's equilibrium using utility analysis. [4]

Answer : A consumer gets equilibrium while consuming two commodities at the point where marginal utility of two commodities is equal to each other.

Let the two goods be X and Y. The equilibrium conditions are :

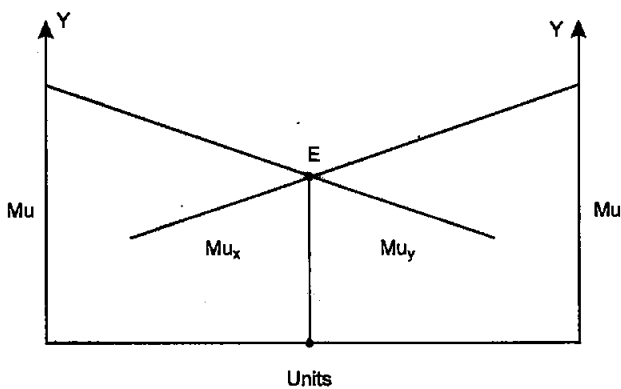
- (1) $\frac{MU_x}{P_x} = \frac{MU_y}{P_y}$
- (2) MU of a good falls as more of it is consumed.

Explanation of consumer's equilibrium using utility analysis :

(1) Suppose $\frac{MU_x}{P_x} > \frac{MU_y}{P_y}$. It makes per rupee MU_x more than per rupee MU_y . This induces the consumer to buy more of X and less of Y. As a result MU_x starts falling and MU_y starts rising. The process continues till

$$\frac{MU_x}{P_x} > \frac{MU_y}{P_y} \text{ again.}$$

(2) Unless the MU of a good falls as more of it is consumed, the consumer will never reach equilibrium again, as $\frac{MU_x}{P_x}$ will not be equal to $\frac{MU_y}{P_y}$.



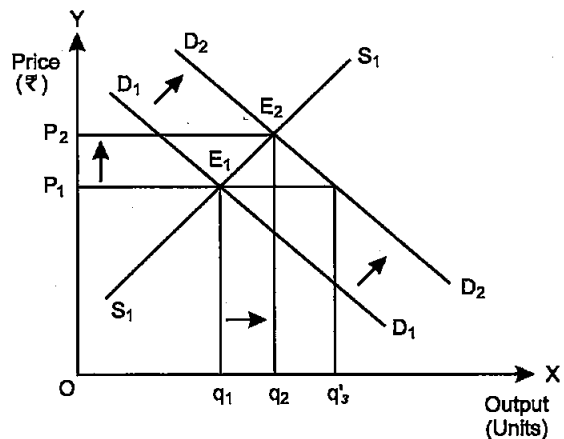
Thus, E is the Equilibrium point.

14. X and Y are complementary goods. The price of Y falls. Explain the chain of effects of this change in the market of X. [6]

OR

Explain the chain of effect of excess demand of a good on its equilibrium price.

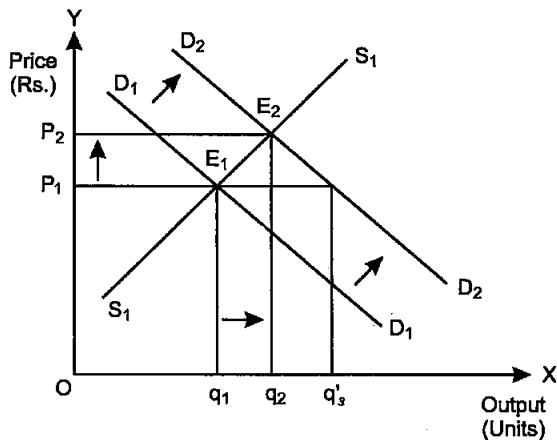
Answer : If X and Y are complementary goods, then a fall in the price of good Y will lead to a rise in the demand of good X. Graphically, the effect of this change can be seen as follows :



Here, suppose D_1D_1 and S_1S_1 are the initial market demand curve and market supply curve, respectively. The initial equilibrium is established at point E_1 , where the market demand curve and the market supply curve intersect each other. Accordingly, the equilibrium price is OP_1 and the equilibrium quantity demanded is Oq_1 .

Now, as the market demand of good X increases, this shifts the market demand curve parallelly rightwards to D_2D_2 from D_1D_1 , while the market supply curve remains unchanged at S_1S_1 . This implies that at the initial price OP_1 , there exist excess demand equivalent to $(Oq'_3 - Oq_1)$ units. This excess demand will increase competition among the buyers and they will now be ready to pay a higher price to acquire more units of good. This will further raise the market price. The rise in the price will continue till the market price becomes OP_2 . The new equilibrium is established at point E_2 , where the new demand curve D_2D_2 intersects the supply curve S_1S_1 . Observe that, at the new equilibrium both market price and quantity demanded are more than the initial equilibrium. The new equilibrium quantity supplied Oq_2 and the new equilibrium price is OP_2 . Hence, an increase in demand with supply remaining constant, results in rise in the equilibrium price as well as the equilibrium quantity.

OR



Suppose D_1D_1 and S_1S_1 are the initial market demand curve and market supply curve, respectively. The initial equilibrium is established at point E_1 , where the market demand curve and the market supply curve intersect each other. Accordingly, the equilibrium price is OP_1 and the equilibrium quantity demanded is Oq_1 .

Now, assume that market demand increases (may be due to an increase in the consumer's income). This shifts the market demand curve parallelly rightwards to D_2D_2 from D_1D_1 , while the market supply curve remains unchanged at S_1S_1 . This implies that at the initial price OP_1 , there exist excess demand equivalent to $(Oq'_3 - Oq_1)$ units. This excess demand will increase competition among the buyers and they will now be ready to pay a higher price to acquire more units of good. This will further raise the market price. The rise in the price will continue till the market price becomes OP_2 . The new equilibrium is established at point E_2 , where the new demand curve D_2D_2 intersects the supply curve S_1S_1 . Observe that at the new equilibrium both market price and quantity demanded are more than the initial equilibrium. The new equilibrium quantity supplied Oq_2 and the new equilibrium price is OP_2 . Hence, an increase in demand with supply remaining constant, results in rise in the equilibrium price as well as the equilibrium quantity.

To summarise,

Excess demand at the existing \Rightarrow Competition among the buyers \Rightarrow Rise in the price level \Rightarrow New equilibrium \Rightarrow Rise in both quantity demanded as well as price.

17. What is revenue deficit ? [1]

Answer : Revenue deficit refers to excess of revenue expenditure over revenue receipts during the given financial year.

26. An economy is in equilibrium. From the following data about an economy calculate investment expenditure :

(i) Income = 10000

(ii) Marginal propensity to consume = 0.9

(iii) Autonomous consumption = 100

Answer :

$$C = \bar{c} + by$$

$$= 100 + 0.9 \times 10000$$

$$C \Rightarrow ₹ 9,100$$

$$\text{Investment} = Y - C$$

$$\Rightarrow 10,000 - 9,100$$

$$\Rightarrow ₹ 900$$

27. Assuming that increase in investment is ₹ 800 crore and marginal propensity to consume is 0.8, explain the working of multiplier. [6]

Answer : The working of multiplier can be explained as follows :

We are given that the value of MPC = 0.8 and also that initial increase in investment is ₹ 800 crore. This implies that with every increase of ₹ 1 in the income, people consume 0.8 part of the increased income i.e., people consume ₹ 0.80 and save ₹ 0.20.

| Round | Increase in Investment ΔI | Change in Income ΔY | Induced Change in Consumption ΔC | Savings ΔS |
|-------|-----------------------------------|-----------------------------|--|--------------------|
| 1 | 800 | 800 | 640 | 160 |
| 2 | — | 640 | 512 | 128 |
| 3 | — | 512 | 409.6 | 102.4 |
| 4 | — | 409.6 | 327.68 | 81.92 |
| 5 | — | 327.68 | 264.14 | 65.54 |

The table shows that initial increase in investment of ₹ 800 will lead to a change in income by ₹ 800 in the first round. As MPC is 0.8, so people will consume 0.8 of the increased income (i.e. ₹ 640), thereby saving ₹ 160. This will be termed as leakage (as it is not ploughed back into the economy).

In the next round, due to the increase in the consumption expenditure by ₹ 640, there will be an increase in income ₹ 640. The people will again spend the increased income i.e. ₹ 512 and save the rest part of the income ₹ 128.

In the third round, similarly the increased consumption expenditure of ₹ 512 will cause a change in the income by ₹ 512. They will spend a part of this income on consumption i.e., ₹ 409.6 and will save the rest of the increased income ₹ 102.4.

This process will continue and the income will go on increasing as a result of increase in consumption. The total change $(\Delta Y) = ₹ 4000$

(approx) and the change in the investment (ΔI) will be 800.

$$k = \frac{1}{1 - MPC}$$

$$= \frac{\Delta Y}{\Delta I}$$

$$k = \frac{1}{1 - 0.8}$$

$$= \frac{\Delta Y}{800}$$

or, $\frac{1}{0.2} = \frac{\Delta Y}{800}$

So, $\Delta Y = 4,000$

Thus, we can observe that an initial increase in the investment by ₹ 800 crore results in increase of income and output by ₹ 4000 crore.

29. Calculate (a) national income (b) net national disposable income : **

| | | ₹ in Crore |
|-------|--|------------|
| (i) | Net factor income to abroad | (-) 50 |
| (ii) | Net indirect taxes | 800 |
| (iii) | Net current transfers from rest of the world | 100 |

| | | |
|--------|--|--------|
| (iv) | Net imports | 200 |
| (v) | Private final consumption expenditure | 5000 |
| (vi) | Government final consumption expenditure | 3000 |
| (vii) | Gross domestic capital formation | 1000 |
| (viii) | Consumption of fixed capital | 150 |
| (ix) | Change in stock | (-) 50 |
| (x) | Mixed income | 4000 |
| (xi) | Scholarship to students | 80 |

Answer :

$$\begin{aligned} \text{(a) National Income} &= (v) + (vi) + (vii) - (iv) - \\ &\quad (viii) - (iii) - (i) \\ &= 5000 + 3000 + 1000 - 200 - \\ &\quad 150 - 800 - (-50) \\ &= 9000 - 200 - 950 + 50 \\ &= 9000 - 200 - 900 \\ &= 9000 - 1100 \\ &= ₹7900 \text{ Crores .} \end{aligned}$$



Economics 2017 (Delhi)

SET III

Time allowed : 3 hours

Maximum marks : 70

Note : Except for the following questions, all the remaining questions have been asked in previous sets.

SECTION-A

6. Explain the problem of 'how to produce.' [3]

Answer : It is the problem relating to the choice of technique of production. Which technique should be used in production - whether labour intensive or capital intensive ? Labour intensive technique uses more of labour as compared to capital while capital intensive technique uses more of capital as compared to labour.

15. Using marginal cost and marginal revenue approach, find out the level of output at which producer will be in equilibrium. Give reasons for your answer.

| Output (Units) | 1 | 2 | 3 | 4 | 5 | 6 |
|---------------------|----|----|----|----|----|-----|
| Average Revenue (₹) | 20 | 20 | 20 | 20 | 20 | 20 |
| Total Cost (₹) | 22 | 42 | 60 | 76 | 96 | 120 |

Answer

| Output | AR (= MR) | TC | MC |
|--------|-----------|-----|----------------|
| 1 | 20 | 22 | 22 |
| 2 | 20 | 42 | 20 |
| 3 | 20 | 60 | 18 |
| 4 | 20 | 76 | 16 |
| 5 | 20 | 96 | 20 Equilibrium |
| 6 | 20 | 120 | 24 |

** Answer is not given due to change in present syllabus

The producer is in equilibrium at 5 units of output, because it fulfills the following two conditions of producer's equilibrium.

1. $MC = MR$
2. MC is greater than MR beyond equilibrium.

SECTION-B

26. An economy is in equilibrium. From the following data, calculate autonomous consumption. [4]

- (i) Income = 10000
- (ii) Marginal propensity to save = 0.2
- (iii) Investment = 1500

Answer : (a) Income = 10,000

(b) Marginal Propensity to save = 0.2

(c) Investment = 1500

$$\begin{aligned}
 Y &= C + I \\
 10,000 &= C + 1500 \\
 C &= 8500 \\
 MPC &= 1 - MPS \\
 &= 1 - 0.2 \\
 &= 0.80 \\
 C &= \bar{c} + by
 \end{aligned}$$

$$8500 = \bar{c} + 0.80 \times 10,000$$

$$8500 = \bar{c} + 8000$$

$$\bar{c} = 8500 - 8000$$

$$= ₹ 500$$

29. Calculate (a) net national product at market price and (b) gross national disposable income : **

| | | ₹ in crores |
|--------|--|-------------|
| (i) | Gross domestic fixed capital formation | 400 |
| (ii) | Private final consumption expenditure | 8000 |
| (iii) | Government final consumption expenditure | 300 |
| (iv) | Change in stock | 50 |
| (v) | Consumption of fixed capital | 40 |
| (vi) | Net indirect taxes | 100 |
| (vii) | Net exports | (-) 60 |
| (viii) | Net factor income to abroad | (-) 80 |
| (ix) | Net current transfers from abroad | 100 |
| (x) | Dividend | 100 |



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