INDIAN SCHOOL MUSCAT

Class : 12 **ANSWERS QUESTION BANK - ECONOMICS (030)** **Reference: NCERT text book**

INTRODUCTORY MICROECONOMICS

UNIT – 1: INTRODUCTION

VERY SHORT ANSWER QUESTION (1 MARK EACH)

1. A common place where buyers and sellers come in close contact to buy or sell goods and services
2. What to produce and what quantity?
   How to produce?
   For whom to produce? (Any two)
3. Resources are available in limited quantities in relation to the demand.
4. Production possibilities show the various alternative combinations of goods and services that an economy can produce when the resources are all fully and efficiently employed.
5. Opportunity cost is defined as the cost of alternative opportunity given up or sacrificed.
6. Production possibilities curve is the diagrammatic presentation that shows the various alternative combinations of goods and services that an economy can produce when the resources are all fully and efficiently employed.
7. It studies the problem of resource allocation
8. No. All economies face economic problem.
9. Planned economy or socialist economy or command economy is based on government control and social welfare motive.
10. It is opportunity cost of good X in terms of good Y given up. It implies that in order to produce more units of one good, some units of the other good must be sacrificed (because of limited resources).

SHORT ANSWER QUESTIONS (3 OR 4 MARKS)

1.
   a) Economy produces only two goods
   b) Amount of resources available in an economy are given and fixed.
   c) Resources are not specific, *i.e.,* they can be shifted from the production of one good to the other good.
   d) Resources are fully employed, *i.e.,* there is no wastage of resources.
   e) State of technology in an economy is given and remains constant.
   f) Resources are efficiently employed.
2.

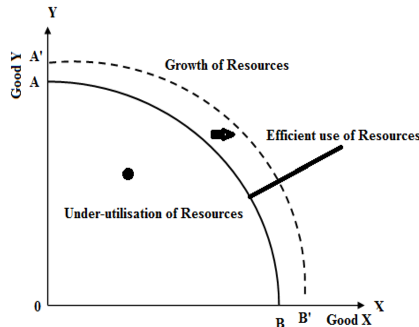
Positive Economics	Normative Economics
It expresses what is.	It expresses what should be.
It is based on cause and effect of facts.	It is based on ethics.
It deals with actual or realistic situation.	It deals with idealistic situation
It can be verified with actual data.	It cannot be verified with actual data.
In this value judgements are not given. I	In this value judgements are given.
It deals with how an economic problem is solved.	It deals with how an economic problem should be solved

3.

Microeconomics	Macroeconomics
It studies individual economic units.	It studies aggregate economic units.
It deals with determination of price and output in individual markets.	It deals with determination of general price level and national output in the country.
In microeconomics is price, consumers and producers take economic decision on the basis of price	In macroeconomics is income, decision relating to consumption, saving, investment etc., are on the basis of national income.
It alms at optimal allocation of resources	It aims at determination of aggregate output, national income, price level and employment level in the economy.
Examples: Individual demand, per capita income, etc.	Examples: Aggregate demand, national income, etc.

4. Every economy has to decide what goods to produce and in what quantities. An economy has to make a choice between consumer, capital, defence or civilian goods on the basis of availability of technology, cost of production. The problem of how much to produce is the problem of quantity of each good to be produced.
5. It is the question of choice of technique of production. Generally, choice of technology is between labour-intensive and capital-intensive techniques. In labour-intensive technique, more labour and less capital is used. In capital intensive technique, more capital and less labour is used. A technique of production which would maximise output or minimise cost should be used. Every economy has to choose the most efficient technique of producing a commodity.
6. This is the problem of how to distribute what is produced among the various income groups of the society. National product is the total output generated by the firms. This raises the problem of distribution of national product among different households.
7. A free market economy is a political economic system based on private property and private profit. In this system, central problems are determined by the market forces of demand and supply.
   Centrally planned economy or socialist economy or command economy is based on government control and social welfare motive. The central planning authority allocates all resources according to pre-specified goals and objectives to attain maximum social welfare.
8. In short run there will be no change in PPC. In long run, educated women will add to the resources of India, PPC will shift to the right.

9.



10. Marginal rate of transformation (MRT) of producing additional unit of good X tends to increase in terms of sacrifice of production of good Y.

Production of Good *X*	Production of Good Y	Marginal Opportunity Cost of Good *X* (in Good Y)
0	18	-
1	17	1X : 1Y
2	15	1X : 2Y
3	12.5	1X : 2.5Y
4	9	1X : 3.5Y
5	3	1X : 6Y

11. The three fundamental reasons for economic problems are allocation of resources. Resources have Alternative Uses. The resources are not only scarce in supply but they also have alternative uses. For example, land can be used to produce wheat or rice or build a hospital or a school.
12. Production possibility curve shows the various alternative combinations of goods and services that an economy can produce when the resources are all fully and efficiently employed. A concave PPC is drawn based on the assumption that in reality infinite production possibilities exist. Along the PPC means full and efficient use of resources. Any point above the PPC means Growth of resources. Any point below the PPC shows underutilization of resources.
13. Production possibility curve shows the various alternative combinations of goods and services that an economy can produce when the resources are all fully and efficiently employed. If the resources are not equally efficient, then the resources are not transferable. Only one of the two goods cane be increased. There will be a parametric shift of PPC either along X-axis or along Y-axis.
14.

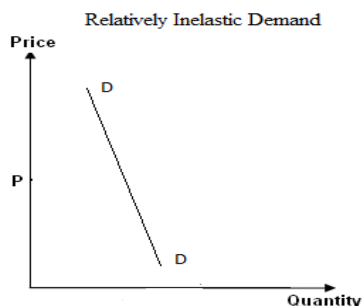
Production of Good *X*	Production of Good Y	Marginal Opportunity Cost of Good *X* (in Good Y)
0	18	-
1	17	1X : 1Y

2	15	1X : 2Y
3	12.5	1X : 2.5Y
4	9	1X : 3.5Y
5	3	1X : 6Y

UNIT – 2: CONSUMER BEHAVIOUR AND DEMAND

VERY SHORT ANSWER QUESTIONS /MCQ (1 MARK EACH)

1. (C) Constant
2. (B) More units of X and less units of Y
3. Till TU = Maximum or MU=0
4. The law of diminishing Marginal Utility states that as the consumer has more and more of a commodity the marginal utility of the commodity falls.
5. Utility refers to the want satisfying power of a commodity.
6. (D) Different combination of two goods that consumer can purchase that gives same level of utility.
7. Combination of two goods that consumer can afford to buy
8. Marginal Rate of substitution
9. Combinations of the two goods that a consumer can buy, given income and prices
10. The new budget line will shows that consumer will buy less of good Y. Budget line will shift downward and become flatter.
11. Demand is defined as the quantity of a commodity or service that a consumer is able and willing to buy at a given price at a given price at a given point of time.
12. 'Other things remaining the same, demand for a commodity decreases with increase in price and demand for a commodity increases with decrease in price.'
13. (C) Complementary good
14. (A) Zero
15.



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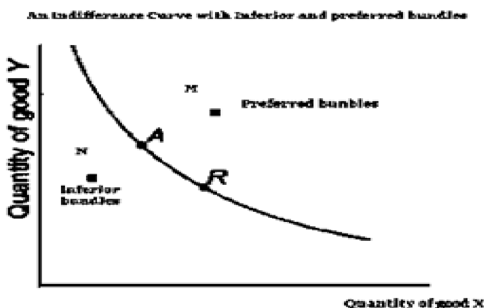
SHORT ANSWER QUESTIONS (3 OR 4 MARKS)

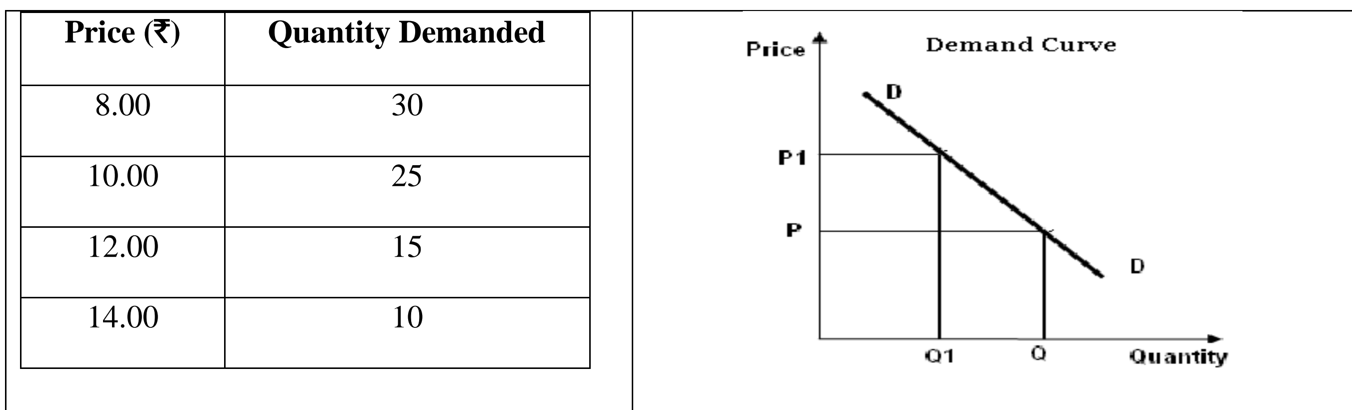
1. Given that utility is a fundamental concept, the MU from different units of a good X can be measured in terms of money. A consumer will buy that quantity of the good where the MU of the good is equal to the price (MU = Price). Marginal utility of the good= Utility of the price paid. If MU> P, the consumer buys more.
2.
    a) Standard unit of measurement is used.
    b) Homogeneous commodity.
    c) Continuous consumption.
    d) Mental and social condition of the consumer must be normal.
3. **Cardinal Utility:** When utility is expressed in exact units. This measurement assumes that utility can be expressed like any quantity.
   Ordinal Utility: When utility is expressed in ranks. It involves comparison of utility in different situations or across different goods and services
4. In utility analysis, it is assumed that utility is cardinally measureable or it can be expressed in exact units. However, utility is a feeling of mind or psychological and there cannot be a standard measure of what a person feels. Therefore, utility cannot be expressed in figures.
5. Assume that ₹1 = 1 util. At equilibrium MU = Price. If the price of ice cream decreases to ₹5 per unit, then MU>Price. Since MU is greater than Price then Lakshmi will buy more units of ice cream to be at equilibrium.
6. An indifference curve shows different combinations of goods that yield the same level of utility or satisfaction to the consumer.



7.
   a) Indifference curves are always convex to origin. This is due to diminishing MRS
   b) Indifference curve always downwards: If the consumer decides to have more units of one good, he will reduce the number of units of another good.
   c) Higher indifference curve represents higher level of satisfaction: The choice of consumer is monotonic between two goods

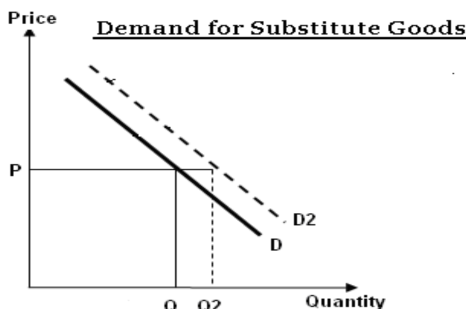
d) Indifference curves can never intersect each other: the point of intersection would represent same level of satisfaction from two different indifference curves, which is not possible.

8. A family of indifference curves is called an Indifference Map. It gives a complete picture of a consumer's scale of preference for two goods. Moving away from the origin moves the consumer to higher levels of utility.
9. Consumption bundles available only in integer units:
   (0,1) (0,2) (0,3) (0,4) (0,5) (1,0) (2,0) (3,0) (4,0) (5,0) (1,1) (1,2) (1,3) (1,4) (2,1) (2,2) (2,3) (3,1) (3,2) (4,1)
   Consumption bundles that lie on the budget line:
   (0, 5) (1, 4) (2, 3) (3, 2) (4, 1) (5, 0)
10. Budget Line is defined as all possible combinations of the two goods that a consumer can buy, given income and prices. Slope of the budget line measures the amount of change in good Y required per unit change in good X along the budget line.
11. Equilibrium is attained when the consumer reaches the highest possible indifference curve given his budget constraint. Consumer's equilibrium point must lie on the budget line and must give the most preferred combination of goods and services. At Equilibrium, the consumer's budget line is tangent to the indifference curve. The optimum point would be always located on the budget line.
12. At point B; consumer's MRS is less than the price ratio. So, the consumer is better off by moving back up towards point A. The optimum point would be always located on the budget line
13. 'Other things remaining the same, demand for a commodity decreases with increase in price and demand for a commodity increases with decrease in price.'



Price (₹)	Quantity Demanded
8.00	30
10.00	25
12.00	15
14.00	10

14. Tea and coffee are substitute goods. There is a direct relation between the two goods. If the price of Tea rises then demand for coffee rises because consumer will substitute Tea with Coffee as Coffee would relatively cheaper. Demand curve for coffee shifts rightwards.



15. Festival bonus of ₹10000/- will increase the disposable income of consumer. The demand for refrigerators will increase in the country as it is a normal good and demand for normal goods rise with rise in income.

16.

Normal Goods:	**Inferior Goods**
Normal goods are those goods which are demanded more at a higher income and less at a lower income.	Inferior goods are those goods, which are, demand more at a lower income and less at a higher income.
Demand is directly related to the change in the level of income of the consumer.	Demand is inversely related to change in income of the consumer
E.g.: Car, refrigerator, etc.	E.g. : Bajra, coarse grains, etc.

17.

Substitute goods	**Complementary goods**
Those goods where each of them can be used in place of another without discomfort.	Those where the utility of a good depend upon the availability of another good
Demand curve for coffee shifts rightwards.	Demand curve for coffee shifts leftwards.
There is a direct relation between the two goods.	There is an inverse relation between the two goods.
Example: Tea and Coffee.	E.g.: Car and petrol.

18. Important exceptions to the law of demand are:-
    a) Status Symbol commodities or 'prestige value commodities'.
    b) Giffen Goods
    c) Conspicuous necessities
    d) Conspicuous consumption.
    e) Future change in prices.
    f) Emergencies
    g) Change in fashion
    h) Ignorance.

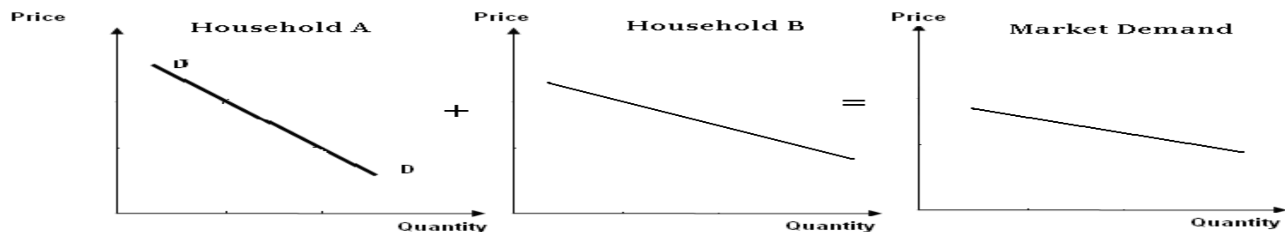
19.

Change in demand (Shift in demand)
✶ It means more or less units of a commodity are demanded at the same price
✶ It is due to change to factors other than the price of the commodity
✶ Consumer shifts to a new demand curve right or left to the original one.
✶ It is the case of increase or decrease in demand
Price Increase in Demand Decrease in Demand P D2 D D1 Q1 Q Q2 Quantity

20.

Change in quantity demanded (Movement along the same demand curve)
✶ It means more or less units of a commodity are demanded due to increase or decrease in price of the commodity
✶ It is due to change in price of the commodity
✶ Consumer moves along the same demand curve in upwards or a downward direction
✶ It is the case of expansion or contraction of demand
Price D Contraction P1 Expansion P D Q1 Q Quantity

21. Market Demand for a commodity refers to the total amount of the commodity bought by all consumers aggregated together at different prices Market demand curve of a good is derived from the individual demand curves graphically by adding up the individual demand curves horizontally.



22. The inverse relationship between demand for a commodity and its price is due to the following reasons:
    a) Demand is based on the concept of utility.
    b) Effects of Income and Substitution. (With Explanation)

LONG ANSWER QUESTIONS (6 MARKS EACH)

1. A consumer will buy that quantity of the good where the MU of the good is equal to the price that he has to pay. This is known as consumer equilibrium. Given that utility is a cardinal concept, the MU from different units of a good X can be measured in terms of money.

Quantity of X	Px (₹)	Mux (₹)
1	5	8
2	5	6
3	5	5
4	5	4
5	5	3

If Px = ₹. 5, then the consumer will buy three units of good X.

If the consumer buys less than 3 units say 2 units then the MU he derives from 2 units is worth ₹ 6 and the price he pays is ₹. 5. Since his MUx> Px, the consumer buys more.

A consumer will not buy more than 3 units of X. This is because if the consumer buys 4 units of X then the price consumer pays (₹ 5) will be more than the MU he derives which is worth ₹ 4.

2. This is called the law of equi-marginal utility. A consumer will so allocate his expenditure so that the utility gained from the last rupee spent on each commodity is equal. In other words, a consumer buys each commodity up to the point at which MU per rupee spent on it is the same as the MU of a rupee spent on another good. When this condition is met, a consumer cannot shift a rupee of expenditure from one commodity to another and increase his utility.

The condition of consumer's equilibrium in case of 2 goods X and Y can be written as:

$$\frac{MUx}{Px} = \frac{MUy}{Py} = \text{MU of a rupee Spent on a good}$$

3.

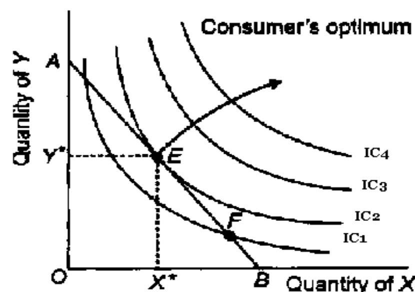
Units consumed:	1	2	3	4	5	6	7	8
Total Utility:	10	18	24	28	31	33	33	29
Price ₹	3	3	3	3	3	3	3	3
Marginal utility	10	8	6	4	3	2	0	-4

If Px = ₹ 3, then the consumer will buy 5 units of the good.

If the consumer buys less than 5 units say 4 units then the MU he derives from the 4th unit is worth ₹4 and the price he pays is ₹ 3. Since his MU> P, the consumer buys more.

A consumer will not buy more than 5 units of X. This is because if the consumer buys 6th unit then the price consumer pays ₹ 3 but the MU he derives which is worth ₹ 2 or MU< P. A consumer will buy only that many units where MU = Price

4. A consumer is in equilibrium when he maximises his utility, given income and market prices. In other words, equilibrium is attained when the consumer reaches the highest possible indifference curve given his budget constraint. Consumer's equilibrium point must lie on the budget line and must give the most preferred combination of goods and services. IC1, IC2, IC3 and IC4 are the preference of a consumer between the two goods X and Y shown by an indifference map. AB is the budget line. At point E, the consumer's budget line is tangent to the indifference curve IC2. It is the point of consumer's equilibrium. If the consumer moves away from point E to any other (point F) on the budget line, he will be on a lower indifference curve. If At point F; consumer's MRS is less than the price ratio. So, the consumer is better off by moving back up towards point E. The optimum point would be always located on the budget line. Points to the right of E are desirable but not attainable. Thus, point E shows the maximum satisfaction of the consumer when X* units of good X and Y* units of good Yare consumed.



5. Budget Line is defined as all possible combinations of the two goods that a consumer can buy, given income and prices. It is mathematically expressed as X1P1 + X2P2 = M

Shift in the budget line can take place when there are:

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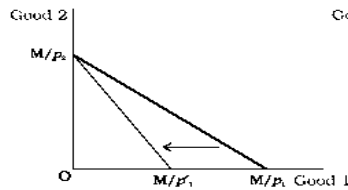
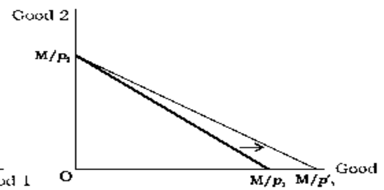
1. **Change in Price**

a) Price of good X falls. Then new budget line shift right toward X – axis becoming flatter. The new budget line AB1 shows that with a fall in price of X1, consumer can buy more of X1. The slope of the line AB changes. The flatter budget line means price of good X1is lesser.

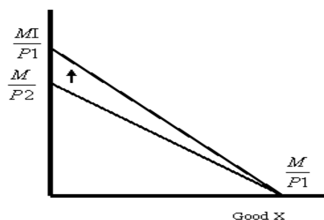
b) Price of good X rises. The new budget line AB1 will shift left inwards to x-axis. AB1 shows that less of good X will be demanded.

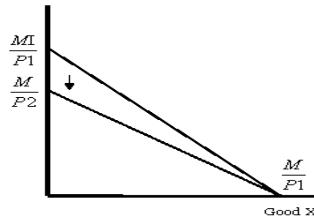




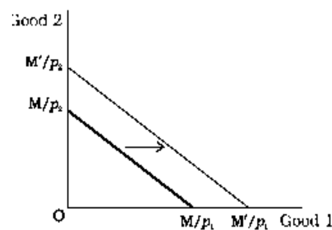
c) Price of good Y falls: The new budget line A1B shows that consumer will buy more of good Y. Budget line AB will shift upward to A1B.

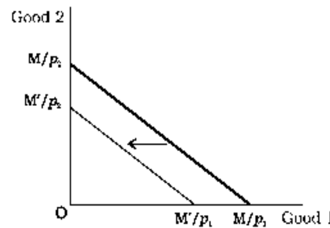
d) Price of Good y rises: The new budget line A1B shows that consumer will buy less of good Y. Budget line AB will shift downward to A2B



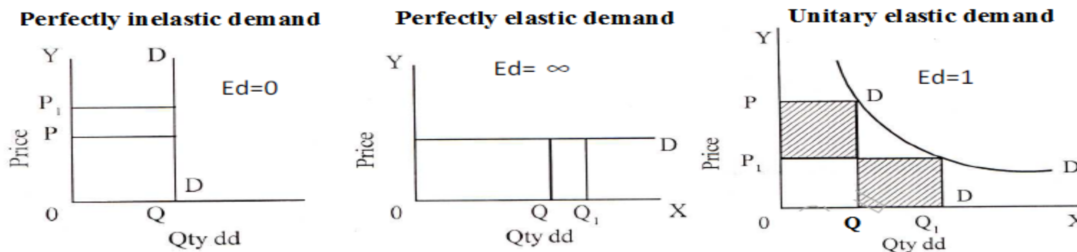


2. **Change in Income:** Money income of the consumer increases then the new budget line will make parallel shift outward. The new budget line A1Bl is parallel to AB. The slope of both the budget lines is same, because prices have not changed. The consumer can buy more of both the goods with increased income. When income falls, budget line will make parallel shift inward.

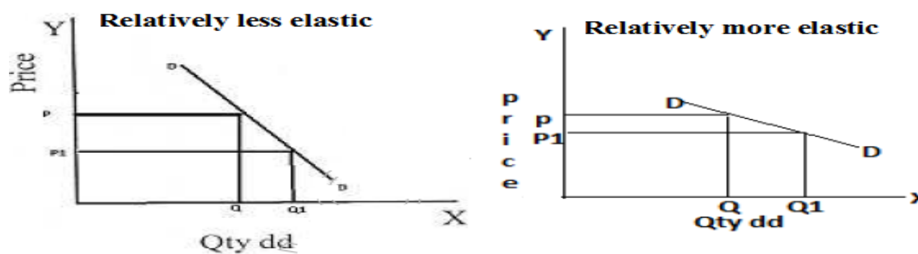




6. Define price elasticity of demand. State the meaning of five cases of price elasticity of demand with suitable diagram.
   Price elasticity of demand is defined as the responsiveness of demand for a commodity to a change in its price.
   a) **Perfectly inelastic demand:** - Even with change in price, there is no change in the quantity demanded, the demand is said to be perfectly inelastic Ed =0. The demand curve is parallel to OY axis.
   b) **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
   c) **Unitary elastic demand**: With a unit increase or decrease in price, there is unit increase or decrease in quantity demanded. The demand curve resembles a rectangular hyperbola.



   d) **Relatively less elastic:** With a unit increase in price, the quantity demanded is proportionately less, then demand is said to be less elastic
   e) **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.



7. Demand for normal goods increases with increase in income and decreases with decrease in income of consumer. Demand for inferior goods decrease with increase in income and increases with decrease in income.
   Substitute goods have a direct relation. If the price of a good rises then demand for its substitute rises because substitutes would relatively cheaper. Complementary goods are those where the utility of a good depend upon the availability of another good. Demand for complement good is affected by the price of good.
   A favourable change in tastes and preferences will increase the demand, whereas an unfavourable change will decrease the demand for the commodity.

NUMERICALS ON PRICE ELASTICITY OF DEMAND

1. ΔP = ₹ 24 New price = ₹ 96
2. Price before change = ₹ 18
3. Price elasticity of demand is = ∞ (infinity)
4. ΔQ = 2 units, New quantity = 12 units
5. Price elasticity of demand = 0.83 (inelastic demand)
6. Quantity demanded before price change = 64 units
7. Price elasticity of demand = 2
8. Quantity demanded before the price change is 50 units
9. Price elasticity of demand = (-) 3
10. Price elasticity of demand = (-) 2.5
11. Price elasticity of demand = (-) 0.003125. Inelastic demand. Percentage change in quantity demand is less than percentage change in price.
12. The consumer will buy = 50 units
13. Price elasticity of demand = (-) 5.25
14. Price elasticity of demand = (-) 0.4

UNIT – 3: PRODUCER BEHAVIOR AND SUPPLY

VERY SHORT-ANSWER QUESTIONS (1 MARK EACH)

1. Production function means the technical and physical relationship between inputs used and the resulting output. It includes only technically efficient combinations of inputs.
2.
   a) Total Physical product
      Total Physical Product is defined as the total quantity of goods and services produced by a firm with the given inputs during a specified period of time.
   b) Marginal Physical product is defined as change in Total Product resulting from employment of an additional unit of variable factor
   c) Average Physical Product is defined as of output produced per unit of variable factor employed
3. MPP also rises
4. TPP rises at a diminishing rate
5. TPP falls rapidly
6. Cost of producing a commodity is the payment made to the factors of production which are used in the production of that commodity.
   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.

7. Total Fixed Cost
   Cost of land. Rent
8. In short run, TFC remains constant
9.
   a) **Total cost**: 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.
   b) **Variable cost**: 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",
   c) **Average cost:** the "cost per unit" of output produced.
   d) **Marginal Cost:** The addition made to total cost when an additional unit of output is produced.
10.
    a) **Total Revenue**: Total sale receipts or receipts from the sale of given output.
    b) **Marginal Revenue**: Additional revenue earned by the seller by selling an additional unit of output.
    c) **Average Revenue**: Revenue received per unit of output sold. AR= price
11. The level of output produced where a firm's profits are maximised.
12. Profits of a firm is the difference between its Total revenue and Total cost
    Normal profit is the minimum amount of profit which is required to keep an entrepreneur in production in the long run.
    Abnormal profits is a situation for the firm when TR > TC.
13. Marginal Revenue equals to Average Revenue
14. TR initially increases, then it reaches it, maximum and finally it falls with increase in output.
    AR and MR curves are both downward sloping and MR curve lies below AR curve.
15. Profit = TR – TC = 400 – 370 (TVC270+ (AFC=25X OUTPUT=4)=100=370)
16. Price elasticity of supply measures the degree of responsiveness of quantity supplied to changes in the price of the good.
17. 'Other things remaining the same', an increase in the price of a commodity leads to an increase in its quantity supplied and vice versa.
18. Decrease in price
19. In short run, supply is relatively inelastic and in long run, it is relatively elastic.

SHORT-ANSWER QUESTIONS (3 OR 4 MARKS EACH)

1. Fixed factors refer to those factors whose supply cannot be changed during short run. These factors remain constant with changes in output. These can never be zero. For example, land, plant, factory building, minimum electricity bill, etc.

Variable factors refer to those factors whose supply can be varied or changed. These factors change with change in output. At zero output, these are also zero. For example, raw materials, daily wages, etc.

2.

Short Period	Long Period
Only variable factors are changed	All factors are changed
Demand is active.	Both demand & supply play an important role.
Factors are classified as fixed & variable.	All factors are variable.

3.
   a) AP curve is the slope of the straight line from the origin to each point on the TP curve. MP curve is the slope of the TP curve at each point.
   b) When AP is maximum, MP = AP.
   c) Both AP and MP curves are inverted U-shaped.

4.
   a) MP curve is the slope of the TP curve at each point.
   b) When TP rises at increasing rate, MP rises
   c) When TP is maximum, MP = O.
   d) When TP is falling, MP is negative.

5. It states that if we keep increasing the employment of the variable input with other fixed inputs then eventually a point will be reached after which the marginal product of that input will start falling.
6. The reasons for increasing returns are:
   a) Underutilisation of fixed factor (land),
   b) Indivisibility of factors, and
   c) Specialisation of labour.
7. Identify different phases of returns to factor proportion from the following schedule. Give reasons.

Variable input (units)	1	2	3	4	5
Total Physical Product	4	9	13	15	12
Marginal Physical Product	4	5	4	2	- 3
Phase of returns	Increasing Returns		Diminishing Returns		Negative Returns

8. Calculate APP and MPP of a factor from the following table of TPP schedule

Factor employment	0	1	2	3	4	5	6	7
Total Physical Product	0	5	12	20	28	35	40	42
APP	0	5	6	6.7	7	7	6.7	6
MPP	0	5	7	8	8	7	5	2

9. The following table gives MPP of a factor. It is also known that TPP at zero level of employment is zero. Determine its TPP and APP schedules.

Factor employment	1	2	3	4	5	6

Marginal Physical Product	20	22	18	16	14	6
TPP	20	42	60	76	90	96
APP	20	21	20	19	18	16

10. The following table gives APP of a factor. It is also known that the TPP at zero level of employment is zero. Determine TPP and MPP schedules.

Factor employment	1	2	3	4	5	6
Average Physical Product	50	48	45	42	39	35
TPP	50	96	135	168	195	210
MPP	50	46	39	33	27	15

11.

Fixed Cost	Variable Cost
FC are incurred on the fixed factors production like machines, buildings, insurance, etc.	VC are incurred on variable factors production like labour, raw material, transport, etc.
FC do not increase or decrease with a rise or fall in the level of output.	VC changes with changes in the level of output.
FC cannot be changed during short-run.	VC can be changed during short-run.
FC are never zero even when production	VC is zero when production is stopped.
Production at the loss of FC may continue	Production at the loss of VC will not continue.
Graphically, TFC curve is parallel to x – axis	Graphically, TVC curve is inverse 'S' shaped

12.

TFC is a horizontal line and TVC is an inverse S-shaped starting from the origin. TC curve is an inverse S-shaped curve starting from the level of fixed cost (₹10). A change in TC is entirely due to change in TVC. TC curve is above TVC curve by the amount of TFC. The vertical distance between TVC and curves is the amount of TFC.

13.

a) AVC is a part of AC since AC = AFC + AVC.
b) The minimum point of ATC will always occur to the right of the minimum point of AVC
c) Both AVC and AC are U-shaped due to the law of variable proportion

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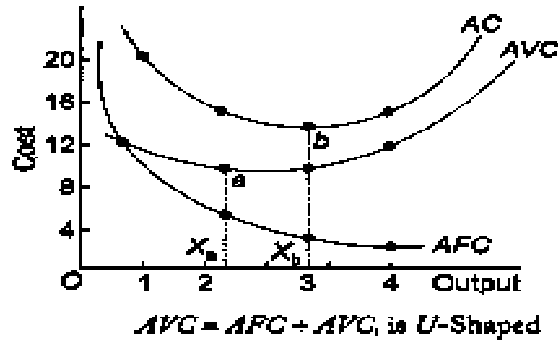
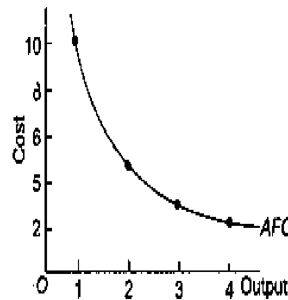


14.

AFC curve derived from TFC curve is a rectangular hyperbola. It shows declining values of fixed cost per unit of output produced because fixed cost remains constant in short run. The downward sloping AFC curve can never touch either the x-axis or the y-axis



15. Identify the following costs as fixed cost or variable cost. Give reasons.
   a) Variable cost
   b) Fixed cost
   c) Fixed cost
   d) Variable cost
   e) Fixed cost
   f) Variable cost
   g) Variable cost
   h) Fixed cost
   i) Fixed cost

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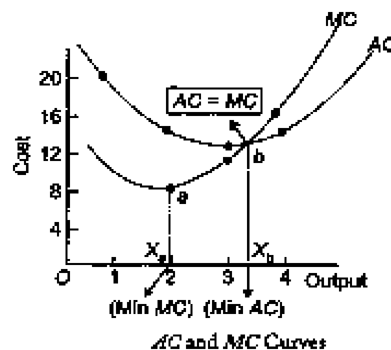
j) Fixed cost

16.

Borrowed money is an explicit coat as interest has to be paid to the financial institution. The rent of shop premises is implicit cost as the shop premises is owned by the producer.

17.

a) Both AC and MC curves are U-shaped, reflecting the law of Variable Proportion.
b) AC includes both variable cost and fixed cost since AC = AFC + AVC. But MC is addition made only to variable cost when output is increased by one more unit.
c) When AC is falling, then MC is below AC.
d) When AC is rising, then MC is above AC.
e) When AC is neither falling nor rising, then MC=AC
f) MC curve cuts the AC curve at its minimum point.



AC and MC Curves

18.

Output Units	ATC ₹	AVC ₹	AFC ₹ (ATC – AVC)	TFC ₹ (AFC x Output)
20	**40**	**37**	**3**	**(3 X20) =60**

19.

Output Units	TVC ₹	AVC ₹	MC ₹
1	**10**	**10**	**--**
2	**16**	**8**	**6**
3	**27**	**9**	**11**
4	**40**	**10**	**13**

20.

Output	0	1	2	3	4	5	6
Total Cost (₹)	10	30	45	55	70	90	120

21.

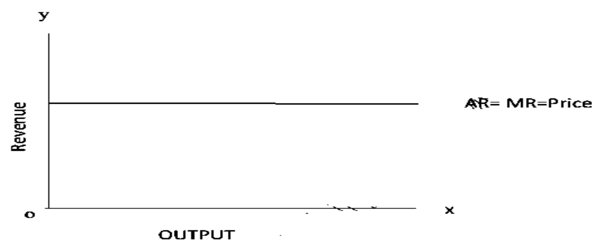
Output	0	1	2	3	4	5	6
MC (₹)	-	500	300	200	300	500	800
TFC(₹)	100	100	100	100	100	100	100
TVC(₹)	0	500	800	1000	1300	1800	2600
TC(₹)	100	600	900	1100	1400	1900	2700
AVC(₹)	0	500	400	333.33	325	360	433.33
SAC(₹)	-	600	450	366.67	350	380	450

22.

Output (Units)	Marginal Cost (₹)	Total Cost (₹)	Average Total Cost (₹)	TFC(₹)	TVC(₹)
1	10	100	100	90	10
2	20	120	60	90	30
3	15	135	45	90	45

23.

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.



24.

Features of perfect competition:

a) Very large number of buyers and sellers.
b) Homogeneous product.
c) Free entry and exit of firms.
d) Perfect knowledge.
e) Firm is a price taker and industry is price maker.
f) Perfectly elastic demand curve (AR=MR)
g) Perfect mobility of factors of production.
h) Absence of transportation cost.
i) Absence of selling cost.

25.

a) The market price P must be equal to the marginal cost (P=MC)
b) The marginal cost curve should be non-decreasing
c) In the short run, price must be greater than or equal to the average variable cost and in the long run, price must be greater than or equal to the average cost.

26.

Quantity (units)	1	2	3	4	5	6	7
Price (₹)	8	8	8	8	8	8	8
TR	8	16	24	32	40	48	56
AR	8	8	8	8	8	8	8
MR	8	8	8	8	8	8	8

27.

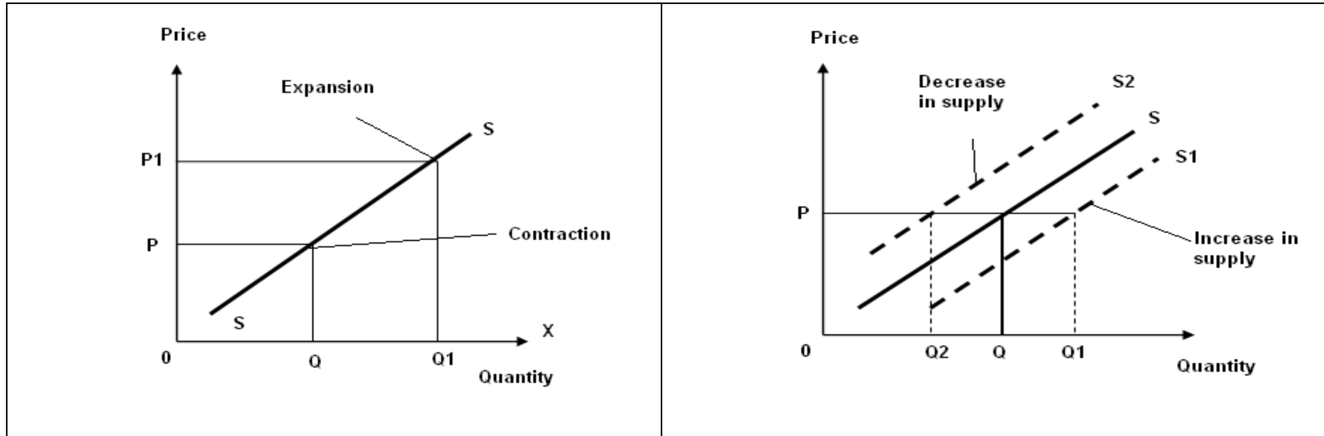
Price (₹)	1	2	3	4	5	6	7
Quantity (Units)	10	9	8	7	6	5	4
TR(₹)	10	18	24	28	30	30	28
AR(₹)	1	2	3	4	5	6	7
MR(₹)	10	8	6	4	2	0	-2

28.

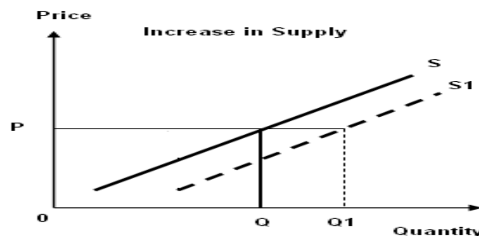
Units Sold	1	2	3	4	5	6	7
Total Revenue (₹)	10	24	33	40	40	36	28
Average Revenue (₹)	10	12	11	10	8	6	4
Marginal Revenue (₹)	10	14	9	7	0	-4	-8

29.

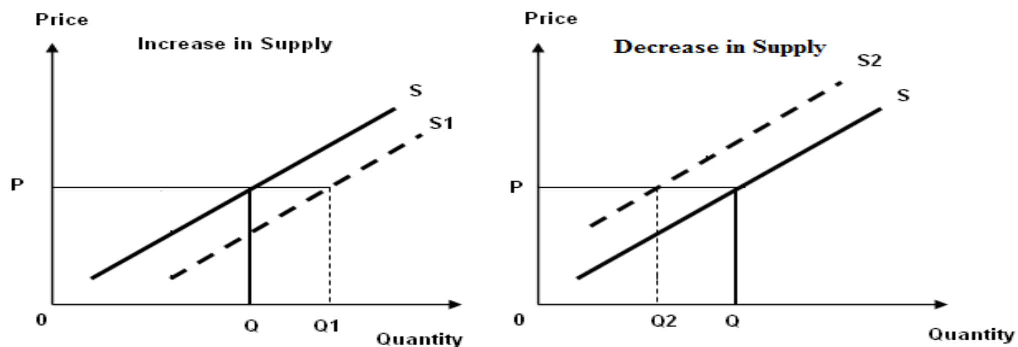
MOVEMENT ALONG THE SAME SUPPLY CURVE CHANGE IN QUANTITY SUPPLIED	**SHIFTS IN SUPPLY CHANGE IN SUPPLY**
✶ More or less units of a commodity are supplied at a higher or lower price of the commodity	✶ More or less units of a commodity are supplied at the same price of the commodity.
✶ It is due to change in price of the commodity	✶ It is due to change in other factors other than price of the commodity.
✶ It is the case of movement along the same supply curve in upward or down ward direction	✶ It is the case of shifts in supply right or left to the original one
✶ It is also called expansion or contraction of supply	✶ It is also called increase or decrease in supply



30.
Any cost saving or innovative method that uses factors of production to produce more units of output is technological progress. It will lower the firm's marginal cost of output and shift the marginal cost curve rightwards. Therefore, at any given market price, the firm supplies more units of output.
The use of out-dated technology has the opposite effect.



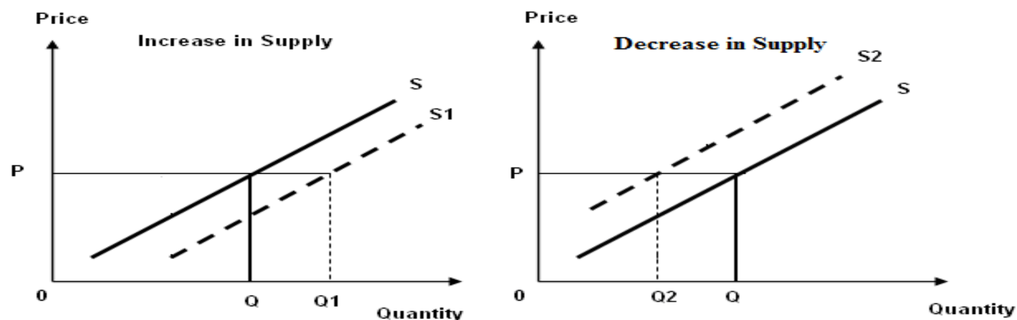
31. How does a change in the price of inputs affect the supply curve of a commodity?
If the price of an input (e.g. wage rate of labour) decreases, the cost of production falls. This will decrease the firm's marginal cost at any level of output. The supply curve will shift rightward. Therefore, at any given market price, the firm supplies more units of output (Increase in supply).
Similarly, If the price of an input (e.g. wage rate of labour) increases, the cost of production rises. This will increase the firm's marginal cost at any level of output. The supply curve will shift leftward. Therefore, at any given market price, the firm supplies fewer units of output (Decrease in supply).



32.

A reduction in the rate of unit tax on sale or production will decrease the marginal cost of production for a firm. This means the firm will supply more output at same price. The marginal cost curve (supply curve) of the firm will shift rightwards. The supply of firm will increase. Therefore, at any given market price, the firm supplies more units of output (Increase in supply).

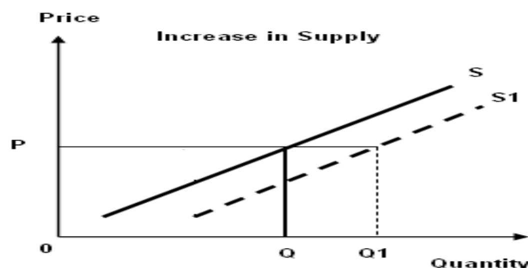
An imposition of additional unit tax on sale or production will increase the marginal cost of production for a firm. This means the firm will supply less output at same price. The marginal cost curve (supply curve) of the firm will shift leftwards. The supply of firm will decrease. Therefore, at any given market price, the firm supplies fewer units of output (Decrease in supply).



33.

If the related good in production has a higher market price and a lower marginal cost of production for the firm then the firm will shift its production to the related good. This means the firm will supply more output of the related good (substitute as well as complementary). The marginal cost curve (supply curve) of the firm will shift rightwards. The supply of firm will increase. Therefore, at any given market price, the firm supplies more units of output (Increase in supply).

If the related good in production has a lower market price and a higher marginal cost of production for the firm then the firm will not shift its production to the related good. This means the firm will continue to supply the good and increase the supply of the good in question. The supply of firm will increase. Therefore, at any given market price, the firm supplies more units of output (Increase in supply).



LONG ANSWER QUESTIONS (6 MARKS EACH)

1.

Relationship between TP, AP and MP Curves

a) AP curve is the slope of the straight line from the origin to each point on the TP curve. MP curve is the slope of the TP curve at each point.

b) When AP is maximum, MP = AP.
c) When TP is maximum, MP = O.
d) When TP is falling, MP is negative.
e) Both AP and MP curves are inverted U-shaped.

Fixed Factor	Variable Factor	(TP)	(AP)	(MP)	Phase
1 acre	0	0	0	-	Increasing Returns
1 acre	1	4	4	4	
1 acre	2	10	5	6	
1 acre	3	18	6	8	
1 acre	4	24	6	6	Diminishing Returns
1 acre	5	28	5.6	4	
1 acre	6	30	5	2	
1 acre	7	30	4.3	0	
1 acre	8	28	3.5	-2	Negative Returns

2.

The law of variable proportion states that when production of a commodity is increased by adding more units of a variable input, while the quantities of fixed inputs are held constant, the increase in total production, after some point, diminishes.

Three Phases of Production

a) Stage I: Increasing Returns: TP curve is increasing at an increasing rate. MP curve rises and reaches a maximum
b) Stage II: Diminishing Returns: Stage II of production starts from the point where MP curve is maximum to the point where the MP curve is zero. MP is positive but diminishes as more variable factors are employed. TP curve increases at a decreasing rate and reaches a maximum.
c) Stage III. Negative Returns: TP curve declines rapidly. MP curve is negative.

3.

Units	0	1	2	3	4	5	6	7	8	9	10	11
TC (₹)	5	10	15	22	27	31	38	48	63	81	101	123
Price (₹)	10	10	10	10	10	10	10	10	10	10	10	10
TR (₹)	0	10	20	30	40	50	60	70	80	90	100	110
MR (₹)	10	10	10	10	10	10	10	10	10	10	10	10
MC (₹)	-	5	5	7	5	4	7	10	15	18	20	22
Profit	-5	0	5	8	13	19	22	22	17	9	-1	-13

7th level of output is profit maximising level of output

4.

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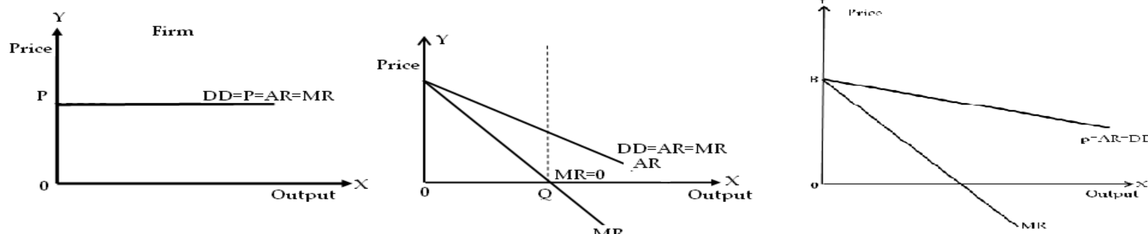
Quantity Sold (Units)	1	2	3	4	5
Price (₹ per unit)	15	16	17	18	19
Total Cost (₹)	14	24	30	51	75
TR	15	32	51	72	95
Profit	1	8	21	21	20
MR	15	17	19	21	23
MC	14	10	6	21	24

4th level of output is profit maximising level of output

UNIT – 4: FORMS OF MARKET AND PRICE DETERMINATION

VERY SHORT-ANSWER QUESTIONS (1 MARK EACH)

1. It means equality between quantity demanded and quantity supplied of a commodity in the market.
2. The price at which market demand of a commodity is exactly equal to the market supply.
3. Excess Supply
4. It is the minimum price above the market equilibrium fixed by the government on certain good. It creates excess supply in the market
5. In order to ensure the availability of the good equally to all government has to adopt rationing by giving a fixed quantity of the good to everyone. Each consumer has to stand in a long queue to buy goods.
6. When demand increases, quantity demanded is more than the quantity supplied. This pushes up the market price. A new equilibrium point is reached at a higher point.
7. When market supply is greater than market demand
8. Oligopoly is defined as a market structure in which there are few sellers of the commodity.
9. Product Differentiation
10. Perfect competition
11.



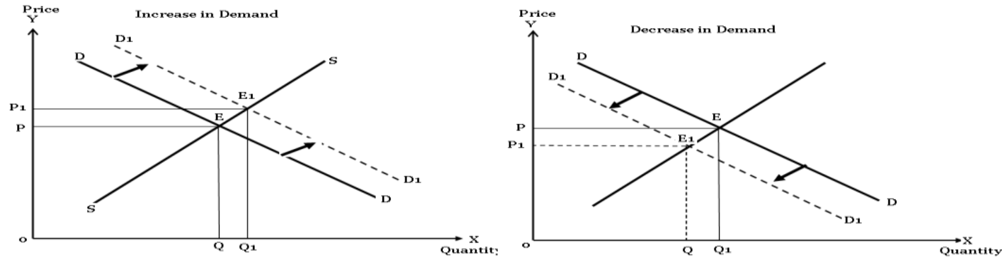
12. Selling cost which is the cost of promoting the demand for its product. Examples of selling costs are advertisements, window displays, salesmen's salaries, etc.

Monopoly does not have selling costs

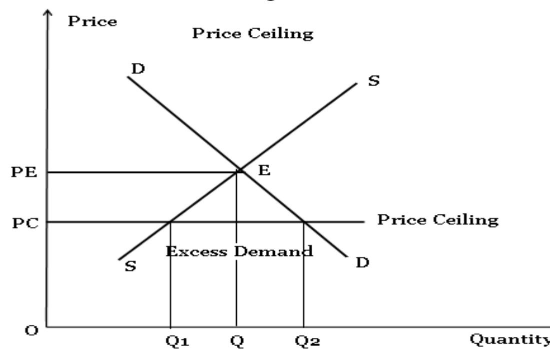
13. If MR is a horizontal straight line (perfect competition), price elasticity of demand in infinity
    If MR is less than AR (Monopoly) price elasticity of demand in inelastic and in Monopolistic competition price elasticity is relatively elastic.
14. Since the market is dominated by a few firms, the price and output decision of one firm affects the profitability of the remaining firms in the market. Mutual interdependence is an incentive to develop alternatives to price competition in the pursuit of economic profit.

SHORT-ANSWER QUESTIONS (3 OR 4 MARKS EACH)

1. It is maximum allowable price for a good or service fixed by the government below the market equilibrium.
   a) Shortages
   b) Ration coupons
   c) Black marketing
2. Reduction in excise duty on tea will reduce it marginal cost of production. Market supply of tea will increase and supply curve will shift to the right. Market price will fall and market supply will rise.
3. A firm under perfect competition is a price taker not a price maker because the price is determined by the market forces of demand of 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.
4. If the prevailing market price is above the market equilibrium as fixed by the government on certain good, it will prevent the price falling from certain level so that the producers are assured of reasonable returns. This is also called price support programme.
   If the prevailing market price is below the market equilibrium as fixed by the government on certain good, it will ensure necessities are made available for the poor section also.
5. A change in input prices also affects a firm's supply curve. If the price of an input (e.g. wage rate of labour) decreases, the cost of production falls. This will decrease the firm's marginal cost at any level of output. The supply curve will shift rightward. Equilibrium price will fall and equilibrium quantity will rise. Similarly, If the price of an input (e.g. wage rate of labour) increases, the cost of production rises. This will increase the firm's marginal cost at any level of output. Equilibrium price will rise and equilibrium quantity will fall.
6. A rise in come of consumer will increase demand for normal goods. Demand curve will shift to the right. Equilibrium price and equilibrium quantity will rise.
   A fall in come of consumer will decrease demand for normal goods. Demand curve will shift to the left. Equilibrium price and equilibrium quantity will fall.



7. Price ceiling is maximum allowable price for a good or service fixed by the government below the market equilibrium. The government imposes an upper limit on price of a good is called a price ceiling. It is generally imposed on necessities to make the good available for the poor section also.



PE is the equilibrium price at which DD=SS.
If this price is too high for the poor section of the population, government fixes a Price Ceiling (PC).
It creates “Excess Demand” because Demand is Greater than Supply.

Consequences of Price Ceiling

a) Shortages: - At a lower price PC, demand increases to Q2, but supply falls to Q1. This will create a shortage of Q1 Q2 for the good in the market.
b) Ration coupons: - In order to ensure the availability of the good equally to all government has to adopt rationing by giving a fixed quantity of the good to everyone. Each consumer has to stand in a long queue to buy goods.
c) Black marketing: - Some seller will hoard stocks and try to sell at a price higher the PC. Some consumers are willing to pay a higher price. This may create Black marketing.

8. 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.
9. If firms are getting abnormal profit new firms will enter the industry. As the number of firms increase, abnormal profits will get shared and finally diminish to become zero. In the long run, all firm will earn only normal profits. Some firms may suffer losses. The number of firms in the industry will decrease as some firms may exit from the industry.

10. A firm under perfect competition is a price taker because the price is determined by the market forces of demand of supply. This price is known as equilibrium price. All the firms in the industry have to sell their outputs at this equilibrium price. The number of firms under perfect competition is so large that no firm can influence the market price by its supply. All firms produce homogeneous product.
11. In perfect competition all firms sell identical products at uniform price. Since price is AR, price remains constant and AR curve is horizontal and parallel to X-axis
    In monopoly, the product sold has no close substitute. The monopoly is a price maker. Price is decided by the monopoly and demand is relatively inelastic. The AR curve represents the demand curve, it is negatively sloped under monopoly.
12. In an oligopoly, due to high degree of interdependency amongst oligopolistic firms, the demand curve faced by an oligopolist cannot be defined. Hence, the solution is indeterminate.
13.
    a) **Product Differentiation:** The products of the sellers are differentiated but are close substitutes of one another. Product differentiation can be real or artificial. Its effect is that sellers can differentiate their products. Since there are many close substitutes for each product, a monopolistic firm faces an elastic demand curve. The MR curve lies below the AR curve.
    b) **Large Number of Sellers:** There are so many buyers and sellers that no individual buyer or seller can influence the price of commodity in the market. Any change in the output supplied by single firm will not affect the total output of the industry. To an individual seller, the price of the commodity is given and the seller can sell whatever output he produces at the given price. An individual sell is a price-taker.
14. 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.
15. It is because the products 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 and negatively sloped.
16. Change in quantity = 400 units; New quantity = 600 units
17. Pes = 1.5
18. Pes = 0 (perfectly inelastic supply)
19. Pes of A = 2; Pes of B = 3; % rise in quantity = 30%
20. Original quantity = 1250 units
21. Original quantity = 500 units
22. Pes = 1.25

<u>LONG-ANSWER QUESTIONS (6 MARKS EACH)</u>

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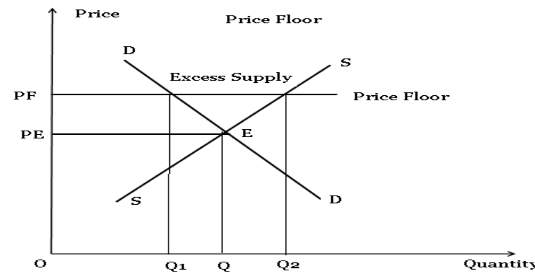
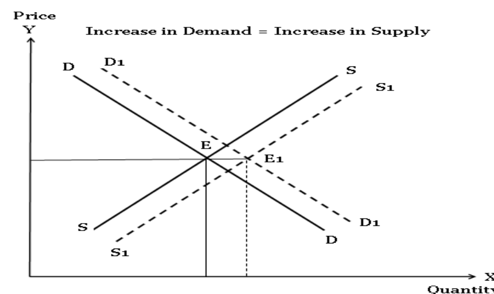
1. Excess supply means supply is greater than demand. Increased supply will push down the market price. The will cause an expansion in demand and decrease in price will cause contraction of supply. This will continue till market equilibrium is reached.



2. When Demand and Supply shift rightwards in same proportion means Increase in demand = Increase in supply. When both demand and supply Increase in same proportion, Equilibrium price remains same and equilibrium quantity exchanged Increases from OQ to OQ1.



3.
   a) **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.
   b) **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.
   c) **Perfect knowledge:** Buyers as well as sellers have complete knowledge about the product.
   d) **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.
4. Monopoly is defined as a market structure in which there is a single firm producing all the output. Example: Govt. ¬the monopoly in providing water supply, railways, etc.

   Features of Monopoly

   The major characteristics of monopoly market structure are:

   a) **Single Firm:** The monopolist is the only producer of the good. So, the distinction between firm and industry disappears.

b) **Product with no Close Substitutes:** There are no close substitutes for the commodity produced by the monopolist. The monopolist produces all the output in a particular market.

c) **The monopolist is a 'price-maker'**. Since there is no difference between firm and industry, the can fix both price and the quantity demanded. However, if the price fixed is high, the quantity demanded will decrease.
Implication: The demand curve is an inelastic demand curve. Demand curve is also the price line and the AR curve. Since AR is downward sloping, MR lies below AR curve.

d) **Restricted Entry**: There are significant barriers to entry.

e) **Perfect Knowledge:** Monopolist is assumed to be having perfect knowledge about market conditions.

5. In oligopolistic firms, prices being rigid imply that prices are administered. Each rival firm reacts immediately to the changed price, due to which the price remains rigid in this market. Since the market is dominated by a few firms, the price and output decision of one firm affects the profitability of the remaining firms in the market. Mutual interdependence is an incentive to develop alternatives to price competition in the pursuit of economic profit.

INTRODUCTORY MACROECONOMICS

UNIT – 6: NATIONAL INCOME AND RELATED AGGREGATES

VERY SHORT-ANSWER QUESTIONS (1 MARK EACH)

1. Flow of income between the different sectors of an economy is called circular flow of income.
2. It is income earned by residents of the country from both within and outside the country of residence.
3. Net factor income from abroad
4. Aggregate income earned by all the households
5. The ratio of nominal to real GNP is called index of prices OR GNP Deflator.

SHORT-ANSWER QUESTIONS (3 OR 4 MARKS EACH)

1.

Real Flow	Money Flow
Exchange of goods and services between firms and house holds	Flow of income and expenditure between firms and households
In real flow raw materials, services of land, labour, capital and enterprises flow from households to firms and goods and services produced flow from firms to households	In money flow payment for factor services like wages, rent, interest and profits flow from firms to households and expenditure on goods and services flow from households to firms.

2. Macroeconomics studies aggregate economic units. It deals with determination of general price level and national output in the country. In macroeconomics is income, decision relating to consumption, saving, investment etc., are on the basis of national income. It aims at determination of aggregate output, national income, price level and employment level in the economy. Examples: Aggregate demand, national income, etc.
3. Gross National Product at market price = National Income (NNPfc) + consumption of fixed capital + net indirect taxes
4.

Domestic Income	National Income
It includes income earned from within the domestic territory	It includes income earned from both within and outside the country of residence.
It includes income earned by residents and non-residents	It includes income earned by residents of the country only.
It does not include net factor income from Abroad	It includes net factor income from abroad
It is geographical concept	It is an economic concept
Domestic income= National income- Net factor income from abroad	National income = Domestic income + net factor income from abroad.

5.

Consumption Goods	Capital Goods
These are consumed when purchased by their ultimate consumers	Goods that are used in the production process but these are not ultimately consumed
These can be further identified according to their life time of use (Durability) as: a) Consumer Durables b) Consumer Non-durables c) Consumer Services	Capital goods constitutes Gross investment in an economy. These may be machines, tools and implements; buildings, office spaces, storehouses or infrastructure like roads, bridges, airports, etc.

6.

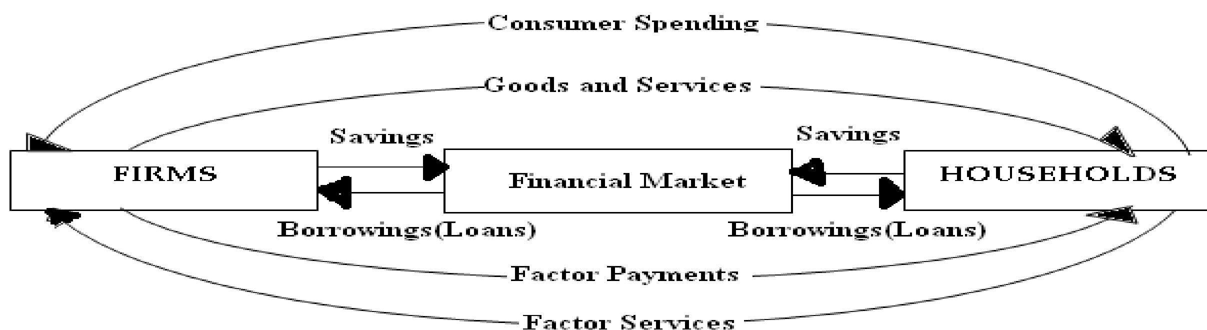
Stock Variable	Flow Variable
Economic variable measured at a point of time	Economic variable measured over a period of time.
Stock doesn't have a time dimension. It is a static concept	Flow has a time dimension. A dynamic concept
Examples: wealth, capital, population, Leakages, Withdrawals from the income flow E.g. Taxes, Savings, Imports.	Examples: Income, consumption, Investment. Injections, Additions to income flow, Government expenditure, Investment, exports

7. New addition to capital stock in an economy is measured by net investment or new capital formation, which is expressed as:
   Net Investment = Gross investment – Depreciation
   Gross Investment = Net investment + Depreciation
8.

Intermediate Goods	Final Goods
Those foods that are used to produce other goods and therefore they always· move from one stage of production to another in manufacturing if final products.	Those goods that are for final use by the consumer or by the firms.
These are non-finished goods and meant for further production or for resale.	These are finished goods and meant for final consumption or for investment
Their value is not included in national income accounts	Their value is included in national income accounts
These do not cross the production boundary. It depend on short term demand	These come out of the production boundary.

LONG-ANSWER QUESTIONS (6 MARKS EACH)

1.
The households in the economy supply their factor services of Land, Labour, Capital and Enterprise to firms. Firms combine their stock of capital goods, tools, machines, infrastructure etc. to produce goods and services. This is called Real flow
Households receive factor payments (Rent, Wages, Interest and Profits) in return to their supply of factor services. The same factor income is used to buy the goods and services produced by the firms. This is called Money flow.



Financial markets mobilize savings and borrowings.

2. **Value Added (Production) Method**

a) **Avoid double counting**: Value added equals value of output less intermediate cost. There is a possibility that instead of counting 'value added' one may count value of output. This will lead to overestimation of national income.
b) **Do not include sale of second hand goods:** Sale of the used goods is not a production activity. The good should not be treated as fresh production, and therefore doesn't qualify for inclusion in national income. However, any brokerage or commission paid to facilitate the sale is a fresh production activity should be included.
c) **Self-consumed output must be included:** Output produced but retained for self-consumption, rather than selling in market, is output and must be included in estimates. E.g. Services of owner-occupied buildings, farmer consuming own produce, etc.

Income Distribution Method

a) **Avoid transfers:** National income includes only factor payments, i.e. payment for the services rendered to the production units by the owners of factors. Any payment for which no service is rendered is called transfers. Transfers are not a production activity and not included in national income. E.g. of transfer- Gifts, donations, charities, etc.
b) **Avoid capital gain**: Capital gain refers to the income from the sale of second hand goods and financial assets. Incomes from the sale of old cars, old house, bonds, debentures, etc. are some examples. These transactions are not production transactions.
c) **Include income from self-consumed output:** When a house owner lives in that house, he does not pay any rent. But in fact he pays rent to himself. Since rent is a payment for services rendered, even though rendered to the owner itself, it must be counted as a factor payment.
d) **Include free services provided by the owners of the production units:** Owners work in their own unit but do not charge salary. Owners provide finance but do not charge any interest. Owners do production in their own buildings but do not charge rent. Although they do not charge, yet the services have been performed. The imputed value of these must be included in national income.

Final expenditure method

a) **Avoid intermediate expenditure:** By definition the method includes only final expenditures, i.e. expenditure on consumption and investment. Like in the value added method, inclusion of intermediate expenditure like that on raw materials, etc. will mean double counting.
b) **Do not include expenditure on second hand goods and financial assets:** Buying second hand goods is not a fresh production activity. Buying financial assets is not a production activity because financial assets are neither good nor services. Therefore they should not be included in estimates of national income.
c) **Include the self-use of own produced final products:** For example, a house owner using the house for self. Although explicitly he does not incur any expenditure, implicitly he is making

payment of rent to himself. Since the house is producing a service, the imputed value of this service must be included in national income.

d) **Avoid transfer expenditures:** A transfer payment is a a payment against which no services are rendered. Therefore no production takes place. Since no production takes place it has no place in national income. Charities, donations, gifts, scholarships, etc. are some examples.

3. **Production Method (Value Added Method)**

First, find out Gross Value Added at Market Price (GVAmp) of each firm in each sector and then take their sum to arrive at GDPmp (Sum total of GVAmp by all the sectors = GDPmp)
Secondly, subtract the value of Depreciation and Net Indirect taxes from GDPmp to get NDPfc
Thirdly, add net factor income from abroad to NDPfc to get national income (NNPfc)

Final Expenditure Method

In this method we take the sum of final expenditures on consumption and investment within the economic territory of the country. This sum equals to GDPmp.
GDPmp = Private final Consumption expenditure (PFCE) + Government final consumption expenditure (GFCE) + Gross domestic Capital formation (GDCF) + Net exports (Export - imports) (X-M)
By making adjustments to GDPmp, we can arrive at national income
NNPfc = GDPmp - Consumption of fixed capital - Indirect Tax + Subsidies + Net Factor Icome from Abroad

NUMERICAL AND APPLICATION QUESTIONS

1. Are the following included in Gross Domestic Product? Give reasons.
   a) Domestic services rendered by a hired servant.
   b) Value of gift received by the government.
   c) Scholarship given by the government by the student.
   d) Sale of secondhand asset by the government.
   e) Employee’s contribution to social security schemes.
   f) Income taxes paid by the people.
   g) Commission paid to a broker who is dealing in secondhand assets.
   h) Purchase or sale of shares and bond.
2. How will you treat the following into National Income Accounting? Give reasons.
   a) Dividend received by an Indian from his investment in a foreign company.
   b) Interest received on loans given to a friend for purchasing a car.
   c) Fees received from students.
   d) Interest received on loan given to a foreign company in India.
   e) Profit earned by a branch of a foreign bank.

f) Expenditure on machines for installation in a factory.
g) Payment of salaries to its staff by a foreign embassy located in New Delhi.
h) Rent paid by the embassy of Japan to an Indian.
i) Imputed rent of self-occupied houses.
j) Interest received on debentures.
k) Financial help received by flood victims.
l) Payment of fees to a lawyer engaged by a firm.
m) Rent free house to an employee.
n) Purchase by foreign tourist.
o) Earnings of the shareholders from the sale of shares.
p) Expenditure by government on providing free education.
q) Purchase of a truck to carry goods by a production unit.
r) Services rendered by family members to each other.
s) Construction of a new house.
t) Expenditure incurred by household on feeding beggars.
u) Income from smuggling.
v) Expenditure on purchasing an old house.
w) Interest paid by banks deposit by individuals.
x) National debt interest.
y) Free dress provided to nurses by hospitals.
z) Subsidy on the output produced.
aa) Expenditure on maintenance of building.
bb) Expenditure on adding a floor to the building.
cc) Expenditure on improvement of a machine in a factory.

3. Value added by firm A = Sales by firm A + Change in stocks of A - Purchase by firm A from firm B - Purchase of firm A from rest of the world
   = 1100 + (200 – 350) – 500 – 300
   = 1100 – 950
   = 150
   Value added by firm B = Sales by firm B + Change in stocks of B - Purchase by firm B from firm A
   = 900 + (300) – 500
   = 1200 – 500
   = 700
4. Calculate Gross Value Added at Factor Cost = Units of output sold (units) X Price per unit of output (`)
   + Change in stocks – intermediate cost – sales tax
   = 1,000 X 30 + (3,000 – 2,000) – 12, 000 - 3, 500

= 31,000 – 15, 500
= ` 22, 500

5. Calculate Net Value Added at Factor Cost = Units of output sold (units) X Price per unit of output (₹) + net change in stocks – intermediate cost – Consumption of fixed capital – Import duty + Subsidy
   = 2, 000 X 10 + (-) 50 – 10, 000 – 600 – 400 + 500
   = 20, 000 – 50 – 10, 000 – 600 – 400 + 500
   = 20, 500 – 11, 050
   = 9450
6. Value added by firm A = Sales by firm A + Change in stocks of A - Purchase by firm A from firm B – Import of raw material by firm A
   = 500 + (50 – 10) – 200 – 80
   = 500 + 40 – 200 – 80
   =540 – 280
   = 260
   Value added by firm B = Sales by firm B + Change in stocks of B - Purchase by firm B from firm A
   = 520 + (25 – 20) -120
   = 520 + 5 – 120
   = 525 – 120
   = 405
7. Net Value Added at Market Price = Value of output - Value of intermediate goods - Consumption of fixed capital
   = 430 – 140 – 30
   = 430 – 170
   = 260
8. Gross value added at factor cost = Domestic Sales + Exports + Change in inventories - Purchase of raw materials + Subsidies
   = 3200 + 300 + (120 – 190) – 200 + 180
   = 3200 + 300 – 70 – 200 + 180
   = 3680 – 270
   = 3, 410
9. Net Value added at factor cost = Sales - Intermediate goods purchased – (Gross domestic fixed capital formation - Net domestic fixed capital formation) - Net indirect taxes
   = 2180 – 920 – (230 – 180) – 230
   = 2180 – 920 – 50 – 230
   = 2180 – 1200
   = 980
10. NDPfc = NVAfc

Net Domestic Product at Factor cost = Sales + Changes in stock - Intermediate consumption - Consumption of fixed capital - Indirect taxes paid + Subsidies
= 320 + 140 – 120 – 20 – 30 + 10
= 470 – 170
= 300

11. Net Value Added at factor cost = Domestic sales + Change in stocks - Purchase of raw materials - Consumption of electricity and fuel - Consumption of fixed capital - Indirect taxes + Subsidies
= 2100 + (500 – 350) – 820 -180 – 250 – 100 + 40
= 2100 + 150 – 820 – 180 – 250 – 100 + 40
= 2290 – 1350
= 940
Factor Income generated = Compensation of employees + Rent + Interest + Profit
= 700 + 80 + 30 + 130
= 940
12. Net Value Added at factor cost = Sales + Change in stocks + Used for self-consumption by the producer - Purchase of raw material - Electricity charges - Consumption of fixed capital - Excise duty
= 500 + (25 – 100) + 50 – 250 – 15 – 30 – 10
= 500 – 75 + 50 – 250 – 15 – 30 – 10
= 550 – 380
= 170
13. Net Value added at Market Prices = Sales + Change in stocks - Intermediate Cost – Depreciation
= 40 + (8-7) – 12 – 5
= 40 + 1 – 12 – 5
= 41 – 17
= 24
14. Gross Value Added at factor cost = Sales + Change in stocks - Intermediate Cost - Net indirect taxes
= 50 + (0 – 4) – 20 – 8
= 50 – 4 – 20 – 8
= 50 – 32
= 18
15. GNPmp = Value of output in primary sector - Intermediate consumption of primary sector + Value of output in secondary sector - Intermediate consumption of secondary sector + Value of output of tertiary sector - Intermediate consumption of tertiary sector + Net factor income from abroad
= (200 - 50) + (250 – 60) + (300 – 60) + (-) 15
= 150 + 190 + 240 – 15
= 580 –15

= 565
NNPfc = GNPmp – Depreciation – Net indirect taxes
= 565 – 20 – 25
= 565 – 45
= 520

16. GDPfc = Value of output in primary sector - Intermediate consumption of primary sector + Value of output in secondary sector - Intermediate consumption of secondary sector + Value of output of tertiary sector - Intermediate consumption of tertiary sector - Net indirect taxes
= (10, 000 – 5, 000) + (9, 000 – 4, 000) + (7, 000 – 3, 000) – 100
= 5, 000 + 5, 000 + 4, 000 – 100
= 14, 000 – 100
= 13, 900
NNPfc = GDPfc - Consumption of fixed capital + (Factor income received from abroad - Factor income paid to abroad)
= 13, 900 – 400 + (400 – 600)
= 13, 900 – 400 – 200
= 13, 900 – 600
= 13, 300
17. National Income (NNPfc) = Gross value of output at market prices - Value of intermediate consumption – Consumption of fixed capital - Indirect taxes + Subsidies + Net factor income from abroad
= 15, 500 – 4, 800 – 1, 550 – 950 + 200 + (-) 200
= 15, 500 – 4, 800 – 1, 550 – 950 + 200 – 200
= 15, 500 – 7, 300
= 8, 200
18. Net value added at factor costs = Domestic sales + Exports + Change in inventories - Purchase of raw materials from domestic market - Import of raw materials - Consumption of fixed capital - Indirect taxes
= 45, 900 + 6, 780 + (16, 500 – 12, 800) – 12, 100 – 3, 200 – 1, 500 – 1, 540
= 45, 900 + 6, 780 + 3, 700 – 12, 100 – 3, 200 – 1, 500 – 1, 540
= 56, 380 – 18, 340
= 38, 040
Gross value Added at market prices = Net value added at factor costs + Consumption of fixed capital + Indirect taxes
= 38, 040 + 1, 500 + 1, 540
= 41, 080

19. Gross National Product at market prices = Domestic sales + Exports+ Change in inventories - Purchase of non-durable goods from domestic market - Import of raw materials + (Factor income received from abroad - Factor income paid to abroad)
    = 5, 900 + 600 + (1, 750 – 1, 450) – 1500 – 500 + (110 – 90)
    = 5, 900 + 600 + 300 – 1500 – 500 + 20
    = 6, 820 – 2, 000
    = 4, 820
    Net Domestic Product at factor cost = Gross National Product at market prices – Depreciation - Indirect taxes + Subsidies - (Factor income received from abroad - Factor income paid to abroad)
    = 4, 820 – 380 – 200 + 50 – (110 -90)
    = 4, 820 – 380 – 200 + 50 – 20
    = 4, 870 – 600
    = 4, 270
20. Gross Domestic Product at market prices = Value of output of all sectors - Value of intermediate consumption of all sectors
    = 3, 200 – 1, 800
    = 1, 400
    Net Domestic Product at factor cost = Gross Domestic Product at market price - Consumption of fixed capital - Indirect taxes + Subsidies
    = 1, 400 – 300 – 300 + 70
    = 1, 470 – 600
    = 870
21. Net Value Added at Market Prices = Sales + Changes in stock - Intermediate cost - Indirect taxes + Subsidies
    = 2, 800 + 200 – 1, 200 – 100 + 60
    = 3, 060 – 1, 300
    = 1, 760
22. Gross National Product at factor cost = Value of output - Intermediate cost - Indirect taxes + Subsidies + Net factor income from abroad
    = 5, 400 – 2, 600 – 550 + 150 + 240
    = 5, 790 – 3, 150
    = 2, 640
23. National Income (NNPfc) = Domestic sales + Exports + Change in inventories - Purchase of non-durable goods from domestic market - Import of raw materials – Depreciation - Indirect taxes + Subsidies + (Factor income received from abroad - Factor income paid to abroad)
    = 15, 900 + 1, 600 + (2, 750 – 2, 450) – 2, 500 – 1, 500 – 380 – 1, 250 + 150 + (220 – 190)

= 15, 900 + 1, 600 + 300 – 2, 500 – 1, 500 – 380 – 1, 250 + 150 + 30
= 17, 980 – 5, 630
= 12, 350

24. Calculate NDPfc and NNPfc

	Items	(₹ in crores)
1.	Compensation of employees in cash	2400
2.	Rent	260
3.	Compensation of employees in Kind	240
4.	Mixed income of self employed	750
5.	Employers' contribution to social security schemes	200
6.	Indirect taxes	340
7.	Net factor income from abroad	(-) 15
8.	Consumption of fixed capital	60
9.	Direct taxes	120
10.	Profits	320
11.	Interest	340

25. Calculate GDPmp and GNPmp

	Items	(₹ in crores)
1.	Compensation of employees	760
2.	Rent	140
3.	Interest	230
4.	Undistributed profits	100
5.	Corporate profit taxes	120
6.	Dividends	180
7.	Subsidies	40
8.	Consumption of fixed capital	50
9.	Indirect taxes	80
10.	Net factor income from abroad	30
11.	Mixed income of self employed	110

26. Calculate NDPmp and GNPfc

	Items	(₹ in crores)
1.	Compensation of employees	2100
2.	Mixed income of self employed	300
3.	Operating surplus	3700
4.	Gross capital formation	4200
5.	Net capital formation	4100
6.	Net indirect taxes	350
7.	Subsidies	50
8.	Net factor income from abroad	60

9.	Employer's contribution to social security schemes	40

27. Calculate GDPfc and NNPmp

	Items	(₹ in crores)
1.	Rent and Royalty	1650
2.	Interest	1260
3.	Compensation of employees	4230
4.	Employers contribution to social security schemes	200
5.	Mixed income of self employed	1230
6.	Factor income received from abroad	240
7.	Factor payment to abroad	210
8.	Consumption of fixed capital	160
9.	Net indirect taxes	130
10.	Profits	430

28. Calculate NDPfc and GNPmp

	Items	(₹ in crores)
1.	Wages and Salaries in cash	560
2.	Compensation given to employees in kind	130
3.	Employers contribution to social security schemes	120
4.	Rent, Interest and Profits	820
5.	Factor income to abroad	65
6.	Factor income from abroad	85
7.	Consumption of fixed capital	90
8.	Net indirect taxes	80
9.	Mixed income of self-employees	230
10.	Employee's contribution to social security schemes	50

29. Calculate NNPfc and GNPfc

	Items	(₹ in crores)
1.	Compensation of employees	1760
2.	Employers contribution to social security schemes	140
3.	Gross domestic capital formation	320
4.	Rent, Interest and profits	2110
5.	Mixed income of self employed	170
6.	Net domestic capital formation	300
7.	Net factor income from abroad	(-)20
8.	Net indirect taxes	30

30. Calculate National Income

	Items	(₹ in crores)
1.	Profits	200
2.	Rent	80
3.	Interest	50

4.	Wages and salaries in cash and kind	350
5.	Employers contribution to social security schemes	35
6.	Mixed income of self employed	250
7.	Net factor income from abroad	(-)150
8.	Direct taxes	50
9.	Employees contribution to social security schemes	20

31. Calculate National Income

	Items	(₹ in crores)
1.	Compensation of employees	400
2.	Profits	200
3.	Rent	150
4.	Interest	100
5.	Dividends	120
6.	Employers contribution to social security schemes	40
7.	Mixed income of self employed	500
8.	Indirect taxes	100
9.	Factor income from abroad	50
10.	Factor income paid to abroad	100
11.	Employees contribution to social security schemes	70

32. Calculate National Income

	Items	(₹ in crores)
1.	Operating surplus	2100
2.	Net current transfer from abroad	650
3.	Net factor income from abroad	(-)120
4.	Compensation of employees	4300
5.	Mixed income of self employed	1200
6.	Depreciation	280
7.	Net indirect taxes	640

33. From the following data calculate National Income:

	Items	(₹ in crores)
1.	Compensation of employees	800
2.	Rent	200
3.	Wages and salaries	750
4.	Net exports	(–)30
5.	Net factor income from abroad	(–)20
6.	Profit	300
7.	Interest	100
8.	Depreciation	50
9.	Remittances from abroad	80
10.	Taxes on profits	60

34. Calculate operating surplus from the following data:

	Items	(₹ in crores)
1.	Compensation of employees	300
2.	Indirect taxes	200
3.	Consumption of fixed capital	100
4.	Subsidies	50
5.	Gross Domestic Product at market price	600

35. Calculate Operating Surplus from the following data:

	Items	(₹ in crores)
1.	Rent	120
2.	Profit	200
3.	Domestic income	800
4.	Mixed income	70
5.	Wages and salaries	350
6.	Indirect tax	150
7.	Subsidies	50
8.	Depreciation	200

36. From the following data estimate (a) Net Indirect Taxes, and (b) Net Domestic Product at factor cost

	Items	(₹ in crores)
1.	Net national product at market price	1,400
2.	Net factor income from abroad	(–)20
3.	Gross national product at factor cost	1,300
4.	Consumption of fixed capital	100
5.	National debt interest	18

37. Calculate GDPmp and NNPfc

	Items	(₹ in crores)
1.	Government final consumption expenditure	4560
2.	Private final consumption expenditure	7540
3.	Gross domestic fixed investment	2730
4.	Closing stock	1050
5.	Opening stock	850
6.	Consumption of fixed capital	270
7.	Indirect taxes	300
8.	Subsidies	100
9.	Net factor income from abroad	(-)20
10.	Net Exports	(-)40

38. Calculate NDPfc and GNPmp

	Items	(₹ in crores)
1.	Private final consumption expenditure	1760
2.	Government purchase of goods and services	1180

3.	Gross domestic fixed investment	370
4.	Inventory investment	100
5.	Indirect taxes	210
6.	Subsidies	60
7.	Factor income received from abroad	170
8.	Factor income paid to abroad	150
9.	Consumption of fixed capital	30
10.	Net export	(-)120

39. Calculate NNPmp and NDPfc

	Items	(₹ in crores)
1.	Government purchase of goods and services	120
2.	Households final consumption expenditure	600
3.	Inventory investment	10
4.	Indirect taxes	100
5.	Final consumption expenditure of Private Non Profit Institution	30
6.	Gross Domestic fixed investment	110
7.	Net Exports	(-)20
8.	Subsidies	30
9.	Net factor income from abroad	(-)5
10.	Consumption of fixed capital	10

40. Calculate NDPmp and NNPfc

	Items	(₹ in crores)
1.	Purchase of goods and services by the government	3150
2.	Final consumption of private non-profit making institutions	1750
3.	Household’s final consumption expenditure	7300
4.	Gross domestic fixed investment	2400
5.	Changes in stock	850
6.	Net export	240
7.	Indirect taxes	430
8.	Subsidies	130
9.	Net factor income from abroad	(-)120
10.	Depreciation	150

41. Calculate GNPmp and NDPfc

	Items	(₹ in crores)
1.	Private final consumption expenditure	1760
2.	Purchase of goods and services by the government	560
3.	Net domestic fixed capital formation	720
4.	Changes in inventory stock	120
5.	Net imports	100

6.	Consumption of fixed capital	110
7.	Indirect taxes	90
8.	Subsidies	40
9.	Net factor income from abroad	(-)15

42. Calculate GNPfc

	Items	(₹ in crores)
1.	Closing stock of inventories	190
2.	Opening stock of inventories	170
3.	Households final consumption expenditure	1920
4.	Final consumption of non-profit institutions	180
5.	Gross domestic fixed investment	800
6.	Factor income paid to abroad	280
7.	Indirect taxes	120
8.	Subsidies	40
9.	Net export	20
10.	Factor income received from abroad	270
11.	Government purchase of goods and services	450

43. Calculate GDPmp and NDPfc

	Items	(₹ in crores)
1.	Private final consumption expenditure	2100
2.	Gross domestic fixed investment	1250
3.	Changes in inventory stock	70
4.	Export of goods and services	210
5.	Import of goods and services	250
6.	Consumption of fixed capital	30
7.	Net factor income from abroad	(-)15
8.	Indirect taxes	85
9.	Subsidies	25
10.	Government expenditure on goods and services	160

UNIT – 7: MONEY AND BANKING

VERY SHORT-ANSWER QUESTIONS (1 MARK EACH)

1. Money is anything which can serve as a medium of exchange.
2. Bonds are papers bearing the promise of a future stream of monetary returns over a certain period of time.
3. Demand deposits are deposits payable by the bank on demand
4. Legal tender refers to money which can be legally used to make payments of debts or other obligations.

5. Under cash reserve ratio, banks are required to deposit with the Central Bank a percentage of their net demand and time liabilities
6. Margin is the difference between the amount of the loan and market value of the security offered by the borrower against the loan
7. When commercial banks fail to meet their financial requirements from other sources, they can approach the central bank for loans and advances as the lender of last resort.
8. When the demand for bonds and the rate of interest will fall below the minimum interest rate, such a situation is called a liquidity trap.
9. It is money produced by the RBI and the government.
10. Banking (Banks) is an institution which performs the functions of accepting deposits, granting loans and making investments with the aim of earning profits.

SHORT-ANSWER QUESTIONS (3 OR 4 MARKS EACH)

1. What are the major drawbacks of a barter system?
   Drawbacks of Barter Exchange
   a) Lack of double coincidence of wants: It is not always possible to find another person who has the diametrically opposite demand for goods being offered in exchange. For example, if the person wants to exchange the surplus rice with clothing, it may be very difficult to find the person with clothing who will be ready to accept rice in exchange.
   b) **Search Cost:** It refers to the time taken to find the right person to enter into barter exchange. The search cost becomes very high as the number of individuals increases.
   c) **Loss of utility.** The commodity for exchange may lose its value by the time the real exchange takes place. This is more in the case of perishable goods.
2. How is bond price and market rate of interest related?
   If the interest rate falls bond prices will rise and if the interest rate rises consequently bond prices will fall.
3. How does money help to overcome the drawbacks of barter exchange?
   The drawbacks of barter are removed with the use of money for transactions. The functions of money facilitate economic transactions without any inconvenience.
4. Discuss the following functions of money:
   a) **Store of value:** money as a store of value means that money can be used to transfer purchasing power from present to future.
   b) **Unit of account:** The value of all goods and services can be expressed in monetary units. For example, a wristwatch for ₹ 500 can be exchanged for 500 units of money. This function of money facilitates to price the products in terms of money.
   c) **Standard of deferred payment:** Deferred payments mean payments to be made in future. Money serves as a standard for deferred payments. Money can perform this function only if its value remains more or less stable.
5. Money supply is defined as the total stock of money in circulation among the public at a particular point of time. RBI has four alternative measures of money supply.
   M1 = CU + DD
   M2 = M1 + Savings deposits with Post Office savings banks

M3 = M1 + Net time deposits of commercial banks
M4 = M3 + Total deposits with Post Office savings organisations (excluding National Savings Certificates)

6. Explain the following functions of central bank:
   a) **Bank of issue:** The Central Bank is the sole authority to print and issue of currency in the country. All the currency issued by the Central Bank is its monetary liability. This means that the Central Bank is obliged to back the currency with assets of equal value. These assets usually consist of gold coin, gold bullion, foreign securities and the domestic government's local currency securities. The country's Central Government is usually authorized to borrow money from the Central Bank. Government does this, by selling local currency securities to the Central Bank.
   b) **Banker to government:** The Central Bank acts as a banker to both Central and State governments. It carries out all the banking business of the government and the government keeps its cash balances on current account with the Central Bank. Central Bank accepts receipts and makes payments for the government and carries out exchange, remittance and other banking operations. The Central Bank also provides short-term credit to the government. Central Bank also has the responsibility of managing the public debt. Central Bank has to manage all new issues of government loans. Central Bank also advises the government on banking and financial matters.
   c) **Banker's bank:** As the banker to banks, the Central Bank holds a part of the cash reserves of banks, lends them short-term funds and provides them with centralised clearing and remittance facilities. The banks are required to deposit a stipulated ratio of their net total liabilities (the CRR) with the Central Bank. The pool of funds with the Central Bank serves as a source from which it can make advances to banks temporarily in need of funds, acting in its capacity as lender of last resort
   d) **Controller of monetary policy:** The Central Bank controls the money supply and credit in the best interests of the economy. The bank does this by taking recourse to various instruments. Generally they are categorised as quantitative and qualitative instruments.

LONG-ANSWER QUESTIONS (6 MARKS EACH)

1. What are the major functions of commercial banks? Explain each
   The main functions that commercial banks perform are:
1. **Acceptance of Deposits:** The bank accepts three types of deposits:
   a) **Current Account Deposits**: Deposits in current accounts are payable on demand. They can be drawn upon by cheque without any restriction. No interest is paid on these deposits.
   b) **Fixed/Term Deposits:** These are deposits for a fixed term (period of time) varying from a few days to a few years. They are not payable on demand and do not enjoy chequing facilities. The moneys deposited in such accounts become payable only on the maturity of the fixed period.
   c) **Savings Accounts Deposits:** These deposits combine the features of both current account deposits and fixed deposits. They are payable on demand and also withdrawable by cheque, but with certain

restrictions on the number of cheques issued in a period of time. Interest is paid in such deposits but less than that of the fixed deposits.

2. **Giving Loans**
   The deposits received by the bank after keeping a certain portion of the deposits as reserves, are given in the form of loans and advances. The different types of loans and advances are as follows:
   a) **Cash Credit:** In this arrangement an eligible borrower is first sanctioned a credit limit up to which he may borrow from the bank. This credit limit is determined by the bank's estimation of the borrower's creditworthiness. The borrower has to pay interest on the 'drawn' or utilized portion of the credit only.
   b) **Demand Loans**: A demand loan is one that can be recalled on demand. The entire loan amount is paid in lump sum by crediting it to the loan account of the borrower. Thus, the entire loan amount becomes chargeable to interest. The security against these loans may be personal, financial assets or goods.

c) **Short-term Loans** - Short-term loans may be given as personal loans, loans to finance working capital or as priority sector advances. These loans are secured loans, i.e. they are loans made against some security. The whole amount of the term loan sanctioned is paid in lump sum by crediting it to the loan account of the borrower. Thus, the entire loan amount becomes chargeable to interest.

3. **Overdrafts**
   An overdraft is an advance given by allowing a customer to overdraw his current account up to an agreed limit. The security for overdrafts is usually financial assets of the account holder such as shares, debentures, life insurance policies etc. Overdraft is a temporary facility and interest is charged on the amount of credit overdrawn.
4. **Discounting Bills of Exchange**
   A bill of exchange is a document acknowledging an amount of money owed in consideration for goods received. When the debt has to be settled the holder can present the bill of exchange to the bank for discounting. The bank will deduct a commission and pay the present value of the bill. Upon maturity of the bill, the bank will secure payment.
5. **Investment of funds:** The banks invest their surplus funds in three types of securities - Government securities, other approved securities, and other securities. Government securities are securities of both the central and state governments such as treasury bills, national savings certificates etc. Banks can sell these securities in the open market to meet their need for cash.
6. **Agency Functions of the Bank**
   The bank performs certain agency functions for its customers in return for a commission.
   The agency services provided by the banks are:
   a) Transfer of fund - the bank provides facility for cheap and easy remittance of funds from place to place via instruments such as the demand drafts, mail transfers, telegraphic transfers etc.
   b) Collection of fund - the bank undertakes to collect funds on behalf of its customers through instruments such as cheques, demand drafts, bills, hundies, etc.
   c) Purchase and sale of shares and securities on behalf of customers
   d) Collection of dividends and interest on share and debentures on behalf of customers.
   e) Payment of bills and insurance premium as per customer's directions.

f) Acting as executors and trustees of wills.
g) Provision of income tax consultancy and acceptance of income tax payments of customers.
h) Acting as correspondent, agent or representative of customers as well as securing documentation for air and sea passage.

7. **Miscellaneous Functions**
   a) Purchase and sale of foreign exchange.
   b) Issuance of travellers' cheques and gift cheques.
   c) Safe custody of valuable goods in lockers.
   d) Underwriting activities (agreeing to partly or fully purchase the whole or the unsold portion respectively of new issue of securities) and private placement of securities (selling securities not through the open market, but privately to selected entities).

2. Briefly explain the credit control measures (Monetary policy measures) of the central bank of a country.

Quantitative instruments

a) **Bank Rate Policy:** The bank rate is the rate at which the central bank lends funds as a 'lender of last resort' to banks, against approved securities or eligible bills of exchange. An increase in the bank rate increases the costs of borrowing from the central bank. This will reduce the ability of banks to create credit. A rise in the bank rate will then cause the banks to increase the rates at which they lend. This will then discourage businessmen and others from taking loans, thus reducing the volume of credit. A decrease in the bank rate will have the opposite effect.
b) **Open Market Operations (OMO):** OMO is the buying and selling of government securities by the Central Bank from / to the public and banks. When Central bank sells government securities to banks it will reduce their reserves. This directly reduces the bank's ability to give credit and therefore decrease the money supply in the economy. When the Central Bank buys securities from the banks it increases reserves of the bank. This directly increases the bank's ability to give credit and thus increase the money supply.
c) **Varying Reserve Requirements:** Banks are obliged to maintain reserves with the Central Bank on two accounts. One is the Cash Reserve Ratio or CRR and the other is the SLR or Statutory Liquidity Ratio. Under CRR the banks are required to deposit with the Central Bank a percentage of their net demand and time liabilities. Varying the CRR is a tool of monetary and credit control. An increase in the CRR has the effect of reducing the banks excess reserves and thus curtails their ability to give credit. The SLR requires the banks to maintain a specified percentage of their net total demand and time liabilities in the form of designated liquid assets which may be (a) excess reserves (b) government and other approved securities and (c) current account balances with other banks. Varying the SLR affects quantum of credit and money supply. Increasing the SLR reduces the ability of banks to give credit and vice versa.

Qualitative instruments

a) **Imposing margin requirement on secured loans**: A margin is the difference between the amount of the loan and market value of the security offered by the borrower against the loan. For example, if the margin imposed by the Central Bank is 40%, then the bank is allowed to give a loan only up to 60% of the value of the security. Changing the margin requirements, the Central Bank can change the amount of loans made against securities by the banks. High margin requirements discourage

speculative activities and divert resources from unproductive speculative activities to productive investments.

b) **Moral Suasion:** This is a combination of persuasion and pressure that the Central Bank applies on the other banks in order to get them to fall in line with its policy. This is exercised through discussions, letters, speeches and hints to banks. The Central Bank frequently announces its policy position and urges the banks to fall in line. Moral suasion can be used both for quantitative as well as qualitative credit control.

c) **Selective Credit Controls (SCCs):** These can be applied in both a positive as well as a negative manner. Application in a positive manner would mean using measures to channel credit to particular sectors, usually the priority sectors. Application in a negative manner would mean using measures to restrict the flow of credit to particular sectors.

d) **Repo Rate:** When the commercial banks are in need of funds for a short period, they can borrow from the Central Bank. The rate of interest charged by the Central Bank on such lending is called Repo Rate. Raising Repo Rate makes such borrowings by the commercial banks costly. As such when Repo Rate is raised, banks are also forced to raise their lending rates. This has a negative effect on demand for borrowings from the commercial banks. Lowering Repo Rate has the opposite effect.

e) **Reverse Repo Rate:** When the commercial banks have surplus funds they can deposit the same with the central bank and earn interest. The rate of interest paid by the Central Bank on such deposits is called Reverse Repo Rate. When this rate is raised, it encourages the commercial banks to park their funds with the central bank. This has the negative effect on the lending capability of the commercial banks. Lowering Reverse Repo Rate has the opposite effect which raises demand for borrowings from the commercial banks.

3. Explain the process of money creation by banks.

Money creation by commercial banks

Money creation (or deposit creation or credit creation by the banks 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 the banks. It is assumed that all the money that goes out of banks is re-deposited into the banks.

Let the LRR be 20% and there is a fresh deposit of ₹ 10,000. As required, the banks keep 20% i.e. ₹ 2000 as cash. Suppose the banks lend the remaining ₹ 8000. Those who borrow use this money for making payments. As assumed those who receive payments put the money back into the banks. In this way banks receive fresh deposits of ₹ 8000. The banks again keep 20% i.e. ₹ 1600 as cash and lend ₹ 6400, which is also 80% of the last deposits. The money again comes back to the banks leading to a fresh deposit of ₹ 6400. The money goes on multiplying in this way, and ultimately total money creation is ₹ 50000.

Given the amount of fresh deposit and the LRR, the total money creation is:

Total Money Creation= initial fresh deposit x 1/LRR

UNIT – 8: DETERMINATION OF INCOME AND EMPLOYMENT

VERY SHORT-ANSWER QUESTIONS (1 MARK EACH)

INDIAN SCHOOL MUSCAT

Class : 12 **ANSWERS QUESTION BANK - ECONOMICS (030)** **Reference: NCERT text book**

1. Define effective demand.
2. What could be the value of multiplier if marginal propensity to consume is equal to marginal propensity to save?
3. When Consumption is equal to income, Average Propensity to consume is:
   a) One
   b) More than one
   c) Negative
   d) Zero
4. When Investment is more than Saving:
   a) Inventory gets accumulated
   b) Inventory gets depleted
   c) No change in inventory
   d) Level of output will decrease.
5. Define investment multiplier.

SHORT-ANSWER QUESTIONS (3 OR 4 MARKS EACH)

1. Why is export considered as a component of Aggregate demand?
2. How is multiplier related to marginal propensity to save?
3. Distinguish between marginal propensity to consume and marginal propensity to save.
4. What are the components of aggregate demand in a three sector economy?
5. How can 'government expenditure' solve the problems of excess and deficient demand?
6. Define consumption function. Explain the Keynesian theory of propensity to consume with suitable diagram.
7. Explain how saving function derived from consumption function.
8. How do monetary and fiscal policy measures solve the problem of deficient demand?
9. Giving reasons state whether the following are true or false.
   a) Average Propensity to save is always a positive value.
   b) A reduction in legal reserve ratio can help to rectify the problem of excess demand.
   c) Marginal propensity to consume can be more than one.
   d) At the time of deflationary gap, central bank should reduce the rate of interest.
10. Define equilibrium level of income. Explain the concept using Savings and Investment approach.

LONG-ANSWER QUESTIONS (6 MARKS EACH)

1. Explain the theory of determination of equilibrium level of income using consumption and investment approach.
2. Define excess demand. Explain its consequences using suitable diagram.

3. Define deficient demand. Explain its consequences using suitable diagram

UNIT – 9: GOVERNMENT BUDGET AND THE ECONOMY

VERY SHORT-ANSWER QUESTIONS (1 MARK EACH)

1. It is total borrowings and other liabilities of the government
2. Non-tax revenue refers to the revenue receipts of the government from sources other than the tax. It includes Commercial Revenue and Administrative Revenue.
3. Borrowings creates a liability
4. Fiscal deficit = Primary deficit + interest payment
   = ₹ 4,400crores + ₹ 400 crores = ₹ 4, 800crores
5. Five per cent of GDP
6. Name the type of budget wherein the estimated revenue falls short of the estimated expenditure.
7. What happens to aggregate demand when the government budget is in deficit?
8. What is commercial revenue?

SHORT-ANSWER QUESTIONS (3 OR 4 MARKS EACH)

1.
   a) **Revenue Budget**: The Revenue Budget shows the current receipts of the government and the expenditure that can be met from these receipts.
   b) **Capital Budget:** The Capital Budget is an account of the assets as well as liabilities of the central government, which takes into consideration changes in capital. It consists of capital receipts and capital expenditure of the government.
2. A tax is a legally compulsory payment imposed by the government.

Direct Tax.	**Indirect Tax**.
When the liability to pay a tax and the burden of that tax fall on the same person	When the liability to pay a tax and the burden of that tax can be on different persons,
The burden of this tax cannot be shifted on to others.	The burden of this tax can to shifted on to others
E.g. gift tax, wealth tax, corporation tax, etc	E.g. entertainment tax, tax on services, excise duty, etc. (Now GST)

3. Revenue deficits are defined as the excess of revenue expenditure over receipts.
   Implications
   Revenue deficit is a reflection of the government's fiscal policy. The implication of revenue deficit is that the government is borrowing to maintain even its consumption expenditure. It shows that the country's financial system is getting destabilised.
4.
   a) **Recovery of loans:** It is a capital receipts because it reduces financial assets of the government.

b) **Corporation tax:** Revenue Receipts. This receipt does not either create a liability or lead to reduction in assets.
c) **Dividends on investments made by government:** Revenue Receipts. This receipt does not either create a liability or lead to reduction in assets.

5.
Plan and non-plan expenditure of Government
a) **Plan Expenditure:** It is the expenditure to be incurred during the year on the programmes under the current five year plan. It is incurred on financing the central plan relating to different sectors of an economy. For example, the assistance provided by the Central Government for the plans of States and Union Territories is plan expenditure.
b) **Non-Plan Expenditure:** Expenditure other than the expenditure related to the current Five-Year Plan is treated as non-plan expenditure. Example: It is necessary to ensure that the capital stock created (example, building) does not become unusable. Thus, the expenditure on maintenance is non-plan expenditure.

Development and non-development expenditure of government
a) **Developmental Expenditure.** Expenditure on activities which directly related to economic and social development of a country is called developmental expenditure. For example: expenditure agriculture and industrial development, education, health, social welfare, scientific research, etc.
b) **Non-developmental Expenditure**. Expenditure on essential general services of the government is called non-developmental expenditure. For example: expenditure on defence and administration. Non developmental expenditure is an essential part of the development process. While it does not directly contribute to the national prod it lubricates the wheels of economic development.

6. Redistribution objective is sought by the government by attracting investors for opening production unites in the backward regions of the country. It can be achieved by a proportional tax basis, where the tax rate is a particular proportion of profits. With respect to excise taxes, necessities of life can be exempted or taxed at low rates, comforts and semi-luxuries are moderately taxed, and luxuries, tobacco and petroleum products are taxed heavily.

7.
a) **Subsidies:** Revenue expenditure. It is an expenditure which does not result in creation of assets or reduction of liability is treated as revenue expenditure.
b) **Grants given to State Governments**: Capital Expenditure. It is an expenditure which leads to creation of assets or reduction in liabilities is treated as capital expenditure.
c) **Repayment of loans:** Capital Expenditure. It is an expenditure which leads to creation of assets or reduction in liabilities is treated as capital expenditure.
d) **Construction of school buildings:** Capital Expenditure. It is an expenditure which leads to creation of assets or reduction in liabilities is treated as capital expenditure.

8. Tax revenues consist of the proceeds of taxes and other duties levied by the central government. There are two types of tax, Direct tax and Indirect tax.
It is revenue that arises from administrative function of the government. Examples: Fees**,** Fines and Penalties, Forfeitures, Escheat, etc.

9.
   a) **Balanced Budget:** It is one when estimated revenues are equal to estimated expenditures. The amount of tax is equal to the amount of expenditure. Balanced budget is a good policy which can bring an economy to a full-employment equilibrium level. It brings about financial stability.
   b) **Surplus Budget:** It is one where estimated revenues are more than estimated expenditures. It lowers aggregate demand. It is a good strategy to control inflation where the economy is in over-employment equilibrium due to excess demand. It is a poor strategy to control deflation.
   c) **Deficit Budget:** It is one where estimated revenue is less than estimated expenditure. It is a good policy to control recession when an economy is in an under-employment equilibrium level. It is not a sign of government inefficiencies. It is a planned strategy of the government to fight recession when the economy is in under employment equilibrium due to deficit demand.

LONG-ANSWER QUESTIONS (6 MARKS EACH)

1. The Government budget is a statement of estimated receipts and expenditures of the government in respect of every financial year.
   a) **Allocation Function:** Certain goods, referred to as public goods (such as national defence, roads, government administration), as different from private goods (like clothes, cars, food items), cannot be provided through the market mechanism and must be provided by the government.
   b) **Distribution Function:** the government attempts to bring about a 'fair' distribution of income through its tax and expenditure policy. The government changes the personal disposable income of households by making transfer payments and collecting taxes to adjust the income distribution.
   c) **Stabilization Function:** The economy has a tendency to be affected by market fluctuations and may suffer from extended periods of unemployment or inflation. The overall level of employment and prices in the economy depends upon the level of aggregate demand which is a function of the spending decisions of millions of households and the government. Budgetary policy stabilises the economy.
2. From the budget estimates of Government of India for the year 2000-2001. Calculate (i) Revenue deficit (ii) Fiscal Deficit (iii) Primary Deficit:

		(₹ crores)
1.	Revenue Receipts	2,037
2.	Revenue Expenditure	2,811
3.	Capital Receipts	1,348
4.	Capital Expenditure	574
5.	Recoveries of loans and other receipts	235
6.	Borrowing and other liabilities	1,113
7.	Interest payments	1,013

3. It is one where estimated revenue is less than estimated expenditure.
   A deficit may be financed by the following ways:

a) **Monetary Expansion or Deficit Financing:** It means that government can print currency notes to the extent of the deficit. It involves borrowing by the government from the Central Bank through the issue of treasury bills to the Central Bank. The Central Bank buys the treasury bills and the government gets cash to fund its deficit.
b) **Borrowing from the Public:** The government may raise loans from general public by issuing bonds of various types. It involves the burden of interest payment, called 'public debt interest'.
c) **Disinvestment:** The government may choose to sell its existing share in public sector enterprises. This is called disinvestment. The process can be used to fund deficits.
d) **Lowering Government Expenditure:** Government should take all the necessary steps to reduce its non-developmental expenditure.
e) **Raising Government Revenue:** Government should take steps to restore balance between direct and indirect taxes. There is scope to have wider coverage in indirect taxes.

UNIT – 10: BALANCE OF PAYMENTS AND FOREIGN EXCHANGE RATE

VERY SHORT-ANSWER QUESTIONS (1 MARK EACH)

1. It is the price of one currency in terms of another.
2.
   a) Foreigners purchasing home country’s goods and services through exports
   b) Foreign investment in home country through joint ventures or through financial market operations
3. 1 US$ = ₹ 50
4. BOT = X – M
   (-)₹ 400 = ₹ 300 – M
   M = ₹ 700
5. The Balance of Payments accounts of a country is a systematic record of all economic transactions between the residents of the reporting country and the residents of the foreign countries during a given period of time.
6.
   a) Autonomous items in the BOP refer to international economic transaction that take place due to some economic motive such as profit maximisation. They are independent of the country's BOP and are also known as above the line items in BOP.
   b) Accommodating items in the BOP refer to transactions that occur because of other activity in the BOP, such as government financing. These items are also referred to as below the line items.
7.
   a) Stability in exchange rates
   b) Promotes international trade
   c) Promotes international investments
   d) Prevent speculative activities
   e) Co-ordination of macroeconomic policies
8. This system is characterised by some hindrances with exchange rate movements but the intervention is

discretionary on the part of the monetary authorities (RBI). There are no prefixed parity values but official rules for intervention.

SHORT-ANSWER QUESTIONS (3 OR 4 MARKS EACH)

1.
   a) To purchase goods and services from other countries.
   b) To send a gift abroad
   c) To purchase financial assets in a particular country
   d) To speculate on the value of foreign currencies.
2. Devaluation refers to reduction in the price of domestic currency in terms of all foreign currencies under fixed exchange rate regime. It is done by government.
   Currency depreciation is a fall in market price of domestic currency price in terms of foreign currency under flexible exchange rate regime. It takes place due to market forces of demand and supply.
3.
   a) Private transactions
   b) Official transactions
   c) Direct investment
   d) Portfolio investment
4. This means that less foreign exchange is demanded as the exchange rate increases. This is caused by the rise in the price of foreign exchange which increases the rupee cost of foreign goods, which makes them more expensive. Consequently the demand for foreign goods declines resulting in a corresponding decline in the demand for foreign exchange.
5. The central bank intervenes in the foreign exchange market to restrict the fluctuations in the exchange rate within certain limits. The central bank maintains reserves of foreign exchange to ensure that the exchange rate stays within the targeted value
6.
   a) **The balance of exports and imports** of goods is called the balance of visible trade and the balance of exports and imports of services is called the balance of invisible trade.
   b) **Unilateral transfers** or unrequited transfers are receipts which residents of a country receive, or payments that the residents of a country make without getting anything in return (receipts and payments for which there is no quid pro quo). Receipts from abroad are entered as positive items and payments abroad are entered as negative items. Unrequited transfers are of two types-
      (i) **Private unrequited transfers** are gifts that domestic residents receive from or make to foreign residents.
      (ii) **Official unrequited transfers** are the receipt of or giving foreign aid, from developed countries or to developing countries.
7. Supply of foreign exchange increases as the exchange rate increases. This makes home country goods become cheaper to foreigner since rupee is depreciating in value. Consequently, the demand for our exports increases as exchange rate increases. The increased demand for exports will result into increased supply of foreign exchange. Thus, the supply of foreign exchange increases the exchange rate increases.
8.

Merits

a) Maintains equilibrium level
b) No need for huge foreign exchange reserves
c) Optimum utilisation of resources
d) Removes barrier to trade and capital movements

Demerits

a) Instability in the exchange rate
b) Speculative activities
c) Creates inflationary situation

LONG-ANSWER QUESTIONS (6 MARKS EACH)

1. **Fixed Exchange Rate System:** Under this system the exchange rate is officially declared and fixed. It is associated with the Gold Standard Systems of 1880-1914. Since the currency value is defined in terms of gold hence the exchange rate is fixed according to the gold value, if currencies that have to be exchanged. This was known as mint par value of exchange. This system was abandoned in 1920.

1. Advantages

a) Stability in exchange rates
b) Promotes international trade
c) Promotes international investments
d) Prevent speculative activities
e) Co-ordination of macroeconomic policies

2. Disadvantages

a) Huge foreign exchange reserves are required
b) Difficulty in fixing the exchange rate
c) Exchange rates are not fixed (pegged)

2.

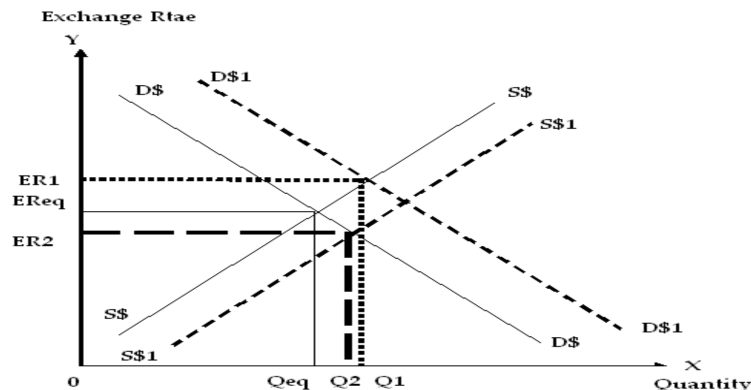
Current account Balance of Payments	Capital account Balance of Payments
It records imports and exports of goods and services and unilateral transfers.	It records all international transactions that involve a resident of the domestic country changing his assets with a foreign resident or his liabilities to a foreign resident.
It consists of - a) **Trade Account:** The balance of exports and imports of goods (Visible trade) and services (Invisible trade) b) **Unilateral transfers or unrequited transfers** are receipts which residents of a country receive, or payments that the residents of a country make without getting anything in return. Unrequited transfers are of two types:	capital account transactions are given below - a) **Private transactions** - These transactions affect assets or liabilities by individuals, businesses and other government entities. b) **Official transactions** - This includes transactions affecting assets and liabilities by the government and its agencies. c) **Direct investment** - It is an act of purchasing an asset and at the same time acquiring control of it other than the ability to re-sell it.

(i) Private unrequited transfers (ii) Official unrequited transfers	d) **Portfolio investment** - It is the acquisition of an asset that does not give the purchase control over the asset.

Import of machinery is recorded in current account as it does not affect the assets and liabilities of residents and foreigners.

3. The demand curve for the exchange market is negatively sloped. This means that less foreign exchange is demanded as the exchange rate increases. This is caused by the rise in the price of foreign exchange which increases the rupee cost of foreign goods, which makes them more expensive.

   The supply curve for the exchange market is positively sloped. This means that supply of foreign exchange increases as the exchange rate increases. This makes home country goods become cheaper to foreigner since rupee is depreciating in value. Consequently, the demand for our exports increases as exchange rate increases. The increased demand for exports will result into increased supply of foreign exchange. Thus, the supply of foreign exchange increases the exchange rate increases. The equilibrium in the foreign exchange market can be shown as follows:



In the above diagram X axis represents the quantity demanded and supplied of foreign currency. The Y axis represents the price in terms of domestic currency. The demand and supply curves intersect to determine the equilibrium exchange rate (EReq) and the equilibrium quantity (Qeq) of foreign currency US $.

-x-x-x-x-x-x-x-x-x-