



B.K. BIRLA CENTRE FOR EDUCATION

SARALA BIRLA GROUP OF SCHOOLS
A CBSE DAY-CUM-BOYS' RESIDENTIAL SCHOOL



TERM - I EXAMINATION (2026-27)

ECONOMICS
MARKING KEY

Class: XI

Date: 07.09.26

Admission no:

SET – II

Time: 3hr

Max Marks: 80

Roll no.:

General Instructions:

Read the following instructions carefully and follow them:

- (i) This question paper contains 34 questions. All questions are compulsory.*
- (ii) This question paper contains 20 Multiple Choice type questions. Each question carries 1 mark.*
- (iii) This question paper contains 4 Short Answer Type-I questions. Each question carries 3 marks. Answer these questions in 60 to 80 words.*
- (iv) This question paper contains 6 Short Answer Type-II questions. Each question carries 4 marks. Answer these questions in 80 to 100 words.*
- (v) This question paper contains 4 Long Answer type questions. Each question carries 6 marks. Answer these questions in 100 to 150 words.*
- (vi) Attempt all parts of a question together.*
- (vii) There is no overall choice in the question paper. However, an internal choice has been provided in few questions. Only one of the choices in such questions has to be attempted.*

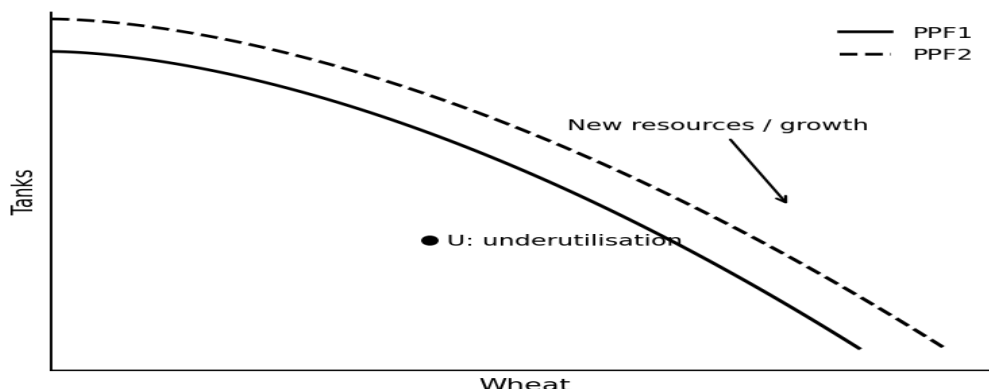
MICROECONOMICS

- 1. (a) 1)
Both statements are true. “For whom to produce” concerns distribution of output, while “how to produce” concerns the choice between labour-intensive and capital-intensive techniques.
- 2. (a) 1)
Both A and R are true, and R correctly explains A. A PPC is concave to the origin because MRT increases as resources are shifted between goods.
- 3. (b) 1)
“The government should spend more on elementary education” is a value judgement and is therefore normative.
- 4. (a) 0.75 1)
Opportunity cost per extra unit of X = 15 units of Y / 20 units of X = 0.75 unit of Y.
- 5. (c) 1)
A point outside the PPC is unattainable with the currently available resources and technology.
- 6. (d) 1)
All three factors can increase demand and shift the demand curve rightward.

7. (a) 1)
Perfectly elastic demand is represented by a horizontal demand curve, parallel to the X-axis.
8. (b) 1)
 $Ed = (20/100) / (2/10) = 1$ in absolute terms.
9. (c) 1)
Two indifference curves cannot intersect each other.
10. (a) 1)
Both A and R are true, and R correctly explains why the consumer keeps buying while MU in money terms exceeds price.
11. (b) 1)
For an inferior good, an increase in income reduces demand, causing a leftward shift.
12. (a) 1)
AP is maximum at the point where $MP = AP$.
13. (b) 1)
AFC continuously falls and is a rectangular hyperbola because TFC remains constant while output rises.
14. (c) 1)
Interest on the entrepreneur's own capital is an imputed or implicit cost.
15. (a) 1)
TFC remains constant at all levels of output, so its curve is parallel to the X-axis.
16. (b) 1)
The area under the MC curve from zero to a given output represents TVC.
17. (b) 1)
TR is maximum when $MR = 0$.
18. (d) 1)
All three statements correctly describe the relationship between MP and TP.
19. (c) 1)
In Stage III, MP becomes negative and TP declines.
20. (b) 1)
Improved technology lowers cost and increases supply, shifting the supply curve to the right.
21. Production Possibility Table 3)
Answer: (i) From C to D, wheat rises from 20 to 30 million tonnes, while tanks fall from 44 to 36 lakhs.
Therefore, $MRT = \text{sacrifice of tanks} / \text{gain of wheat} = 8 / 10 = 0.8$ lakh tanks per million tonne of wheat.

Answer: (ii) If new resources are discovered, the productive capacity of the economy increases. Therefore, the PPC shifts outward/rightward.

Answer: (iii) A point lying inside the PPC indicates underutilisation or inefficient utilisation of available resources.



PPC shifts outward with growth; point U inside the PPC shows underutilisation.

OR

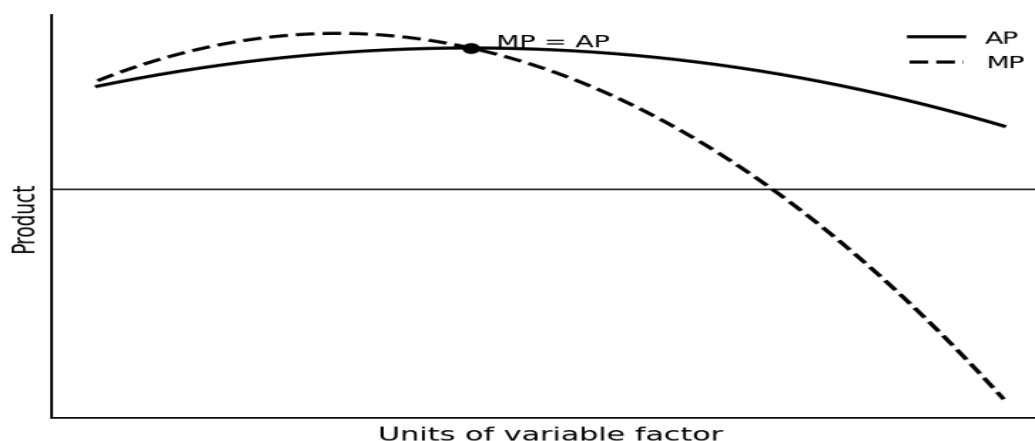
Answer: Positive economics studies “what is” and deals with statements that can be verified with facts. Example: “A fall in the price of a good, other things remaining constant, increases its quantity demanded.” Normative economics studies “what ought to be” and is based on value judgements. Example: “The government should spend more on education.”

22. State whether the statements are True or False, with reasons. 3)

- (a) False. An economy may operate inside its PPF when resources are unemployed or underutilised. It operates on the PPF only when resources are fully and efficiently utilised.
- (b) True. Opportunity cost is the value of the next best alternative that is sacrificed when a choice is made.
- (c) False. Scarcity is a universal economic problem because human wants are unlimited while resources have alternative uses and are relatively limited. It is faced by rich as well as poor households and countries.

23. Explain the relation between Average Product (AP) and Marginal Product (MP). 3)

- When MP is greater than AP, AP rises.
- When MP is equal to AP, AP is at its maximum.
- When MP is less than AP, AP falls.
- MP can become zero or negative while AP may still remain positive.



Relationship between AP and MP

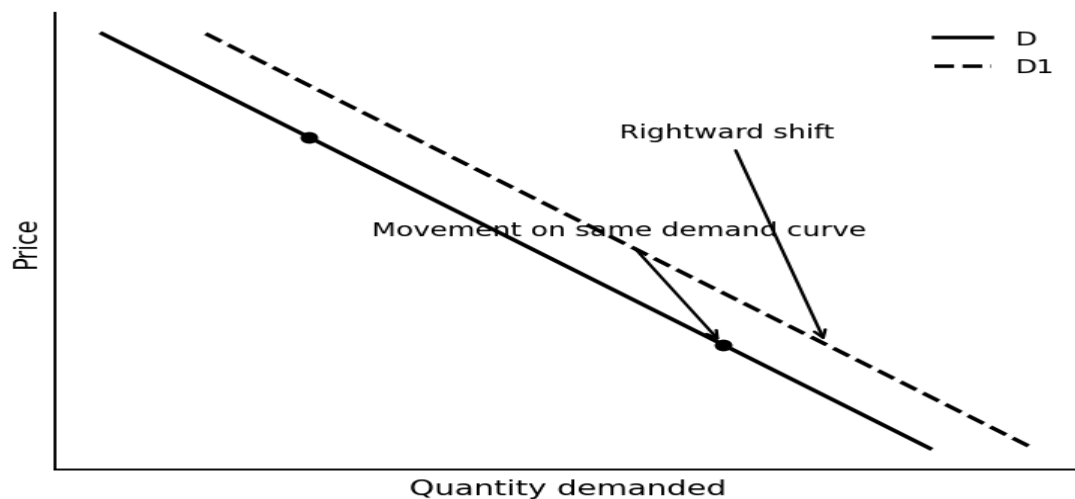
24. Consumer equilibrium when $MU_x/P_x > MU_y/P_y$

3)

Answer: Since MU_x/P_x is greater than MU_y/P_y , the consumer gets more utility per rupee from good X. Therefore, the consumer should buy more of X and less of Y. As consumption of X rises, MU_x falls; as consumption of Y falls, MU_y rises. This adjustment continues until $MU_x/P_x = MU_y/P_y = MU_m$, with the entire income spent. At this point, the consumer is in equilibrium.

OR

Answer: Change in quantity demanded is caused only by a change in the commodity's own price, other factors remaining constant. It is shown by a movement along the same demand curve: expansion when price falls and contraction when price rises. Change in demand is caused by factors other than own price, such as income, tastes or prices of related goods. It is shown by a shift of the entire demand curve.



Movement along a demand curve versus shift of the demand curve

25. (A) Explain Total Opportunity Cost with a diagram.

2)

Answer: Total Opportunity Cost means the total amount of one good that must be sacrificed to produce a given additional quantity of another good. On a PPC, when the economy moves from point A to point B to produce more of Good X, the reduction in Good Y represents the total opportunity cost of the additional X produced.



Total opportunity cost on a PPC

(B) Explain the central problem of “What to produce?”

2)

Answer: Because resources are scarce, an economy cannot produce unlimited quantities of all goods. It must decide which goods and services are to be produced and in what quantities. This includes choices such as consumer goods versus capital goods, necessities versus luxuries, and civilian goods versus defence goods. The decision depends on society's priorities and available resources.

26. (A) Numerical on Price Elasticity of Demand.

3)

Answer: Given: Initial price (P) = Rs. 10, fall in price (ΔP) = -Rs. 2, increase in quantity demanded (ΔQ) = 10 units, $E_d = -1$.

Answer: Using $E_d = -(\Delta Q/\Delta P) \times (P/Q)$:

$$1 = -(10/-2) \times (10/Q) = 50/Q$$

Therefore, $Q = 50$ units.

Hence, the quantity demanded before the change in price was 50 units.

(B). Arrange the coefficients of elasticity of demand in ascending order.

1)

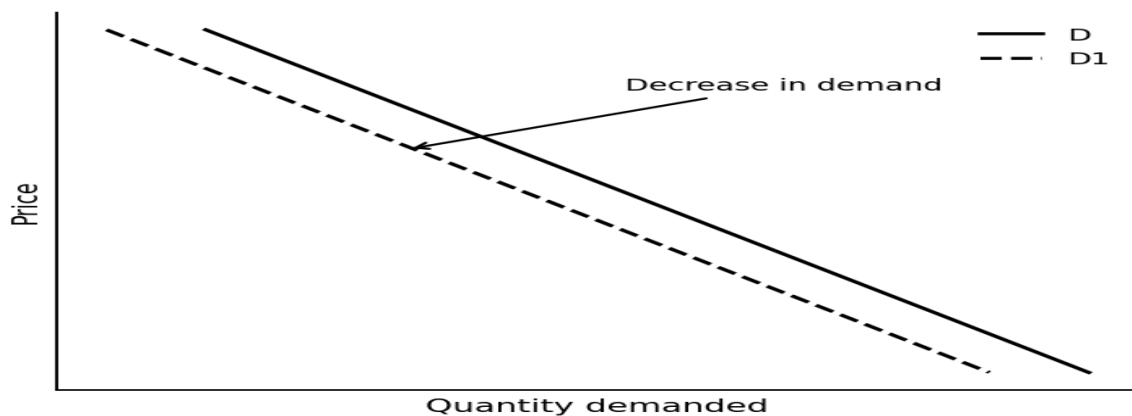
Answer: Ascending order: -0.53, -0.80, -0.87, -3.1. The negative sign only shows the inverse relationship between price and quantity demanded; the degree of elasticity is compared by magnitude.

27. (A) Effect on demand.

3)

• (a) Rise in the price of a complementary good: Demand for the given commodity decreases because complementary goods are used together. For example, if the price of petrol rises, demand for cars may fall. The demand curve shifts leftward.

• (b) Fall in the income of a consumer of a normal good: Demand for the normal good decreases because income and demand for a normal good are directly related. The demand curve shifts leftward.



Both situations cause a leftward shift in demand

(B). What are Giffen goods?

1)

Answer: Giffen goods are highly inferior goods for which quantity demanded rises when price rises and falls when price falls. They are an exception to the Law of Demand because the negative income effect is stronger than the substitution effect and price effect is positive.

28. (A) Consumer equilibrium in a single commodity case.

4)

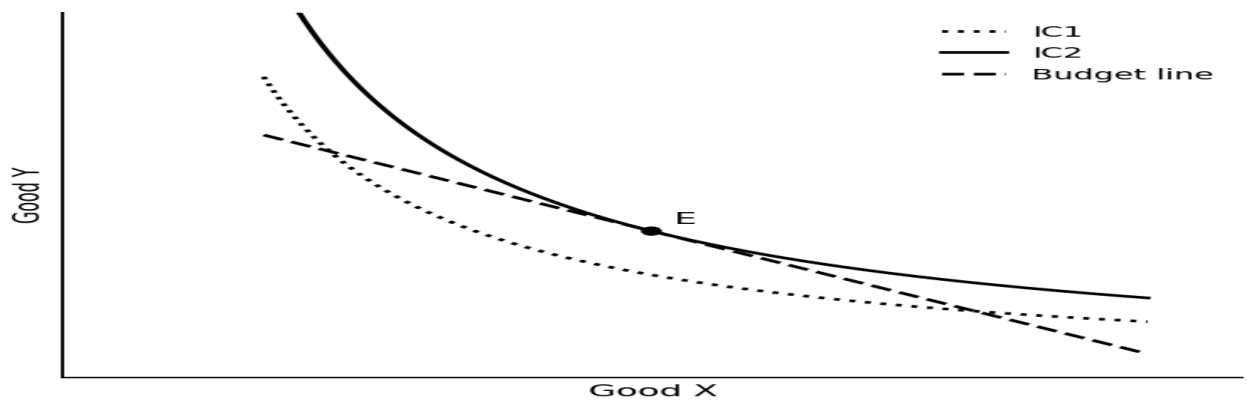
Answer: For a single commodity, equilibrium occurs when $MU_x/P_x = MU_m$ and marginal utility falls as consumption increases. Here, $P_x = \text{Rs. } 6$ and $MU_m = 1$ util, so equilibrium requires $MU_x = 6$ utils. MU is 6 utils at the 4th unit and falls to 4 utils at the 5th unit. Therefore, Rohan is in equilibrium at 4 units.

Answer: Total Utility at 4 units = $12 + 10 + 8 + 6 = 36$ utils. Hence, equilibrium consumption = 4 units and total utility = 36 utils.

OR

Answer: Under indifference curve analysis, a consumer is in equilibrium at the point where the highest attainable indifference curve is tangent to the budget line. The conditions are:

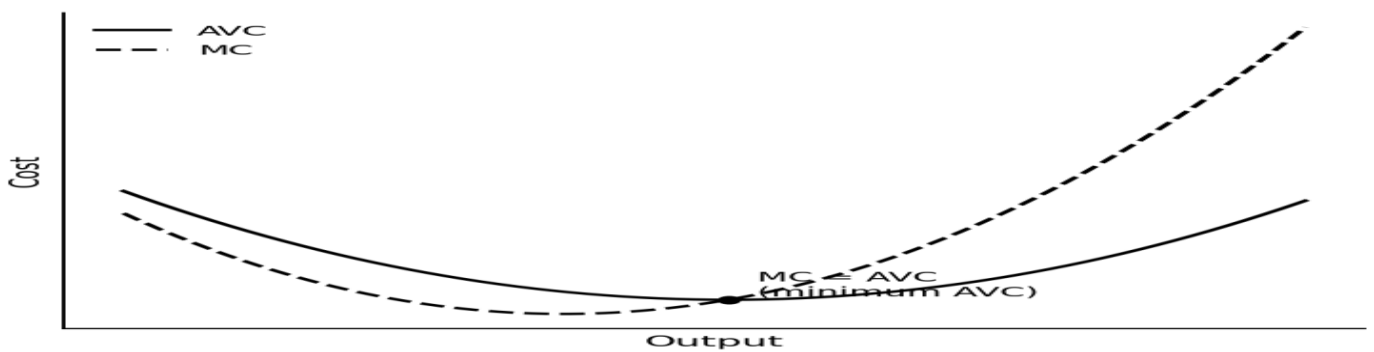
- $MRS_{xy} = P_x/P_y$, i.e. slope of the indifference curve equals slope of the budget line.
- MRS must be diminishing, so the indifference curve is convex to the origin at the equilibrium point.
- The consumer spends the available income according to the budget constraint.



Consumer equilibrium at tangency point E

29. Explain the relationship between Marginal Cost (MC) and Average Variable Cost (AVC). 4)

- When MC is less than AVC, AVC falls.
- When MC is equal to AVC, AVC is minimum.
- When MC is greater than AVC, AVC rises.
- Therefore, the MC curve cuts the AVC curve at the minimum point of the AVC curve.

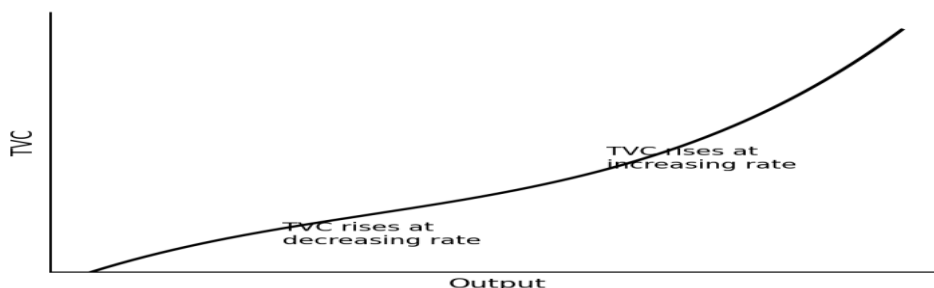


30. (A) Complete the following cost table: 3)

Output (units)	Total Variable Cost (₹)	Average Variable Cost (₹)	Marginal Cost (₹)
1	10	10	10
2	16	8	6
3	27	9	11
4	40	10	13

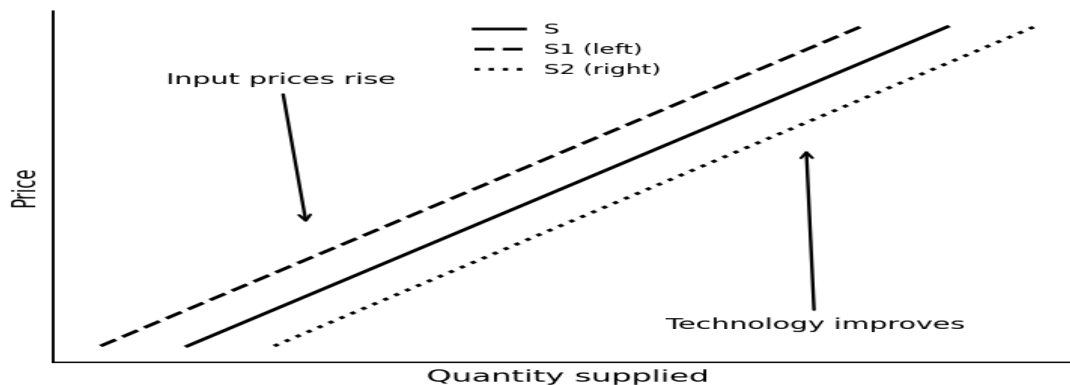
(B) Why is the TVC curve inversely S-shaped? 1)

Answer: Due to the Law of Variable Proportions, TVC initially rises at a decreasing rate when marginal product rises and marginal cost falls. After a point, TVC rises at an increasing rate when marginal product falls and marginal cost rises. Hence, TVC is inversely S-shaped.



OR

Answer: (A) A rise in input prices raises the cost of production and decreases supply, shifting the supply curve leftward. An improvement in technology lowers cost and increases productivity, increasing supply and shifting the supply curve rightward. 2)



Supply shifts due to input prices and technology

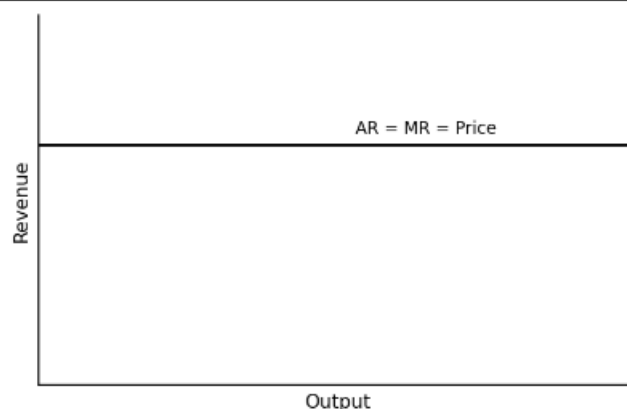
Answer: (B) Stock is the total quantity of a commodity available with a seller at a point of time. Supply is that part of stock which the seller is willing and able to offer for sale at different prices during a given period. Thus, supply cannot exceed stock. 2)

31. Case Study: Revenue curves

Answer: (A) 1)
(i) The passage refers to an imperfectly competitive market, such as monopoly or monopolistic competition. The firm faces a downward-sloping demand curve because it must generally lower price to sell a larger quantity.

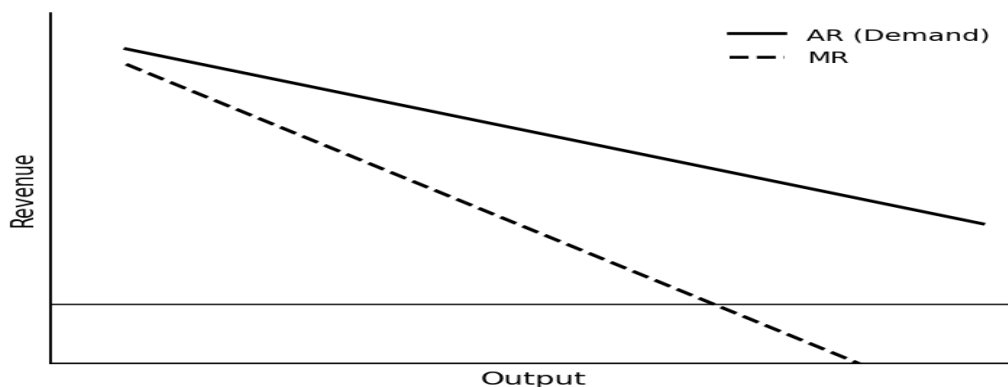
Answer: (ii) When more units are sold at the same price, the firm is a price taker, as under perfect competition. AR and MR are equal to price and remain constant. Hence, both curves are the same horizontal straight line parallel to the X-axis. 3)

Output (units)	Price/AR (Rs.)	TR (Rs.)	MR (Rs.)
1	10	10	10
2	10	20	10
3	10	30	10
4	10	40	10



Under perfect competition: AR = MR = Price

Answer: (B) 2)
Under monopoly and monopolistic competition, AR (the demand curve) slopes downward from left to right. MR also slopes downward but lies below AR because the firm must lower price to sell additional units. If AR is a straight line, MR is steeper and cuts the quantity axis earlier.



32. (A) Explain the Law of Variable Proportions with a schedule.

4)

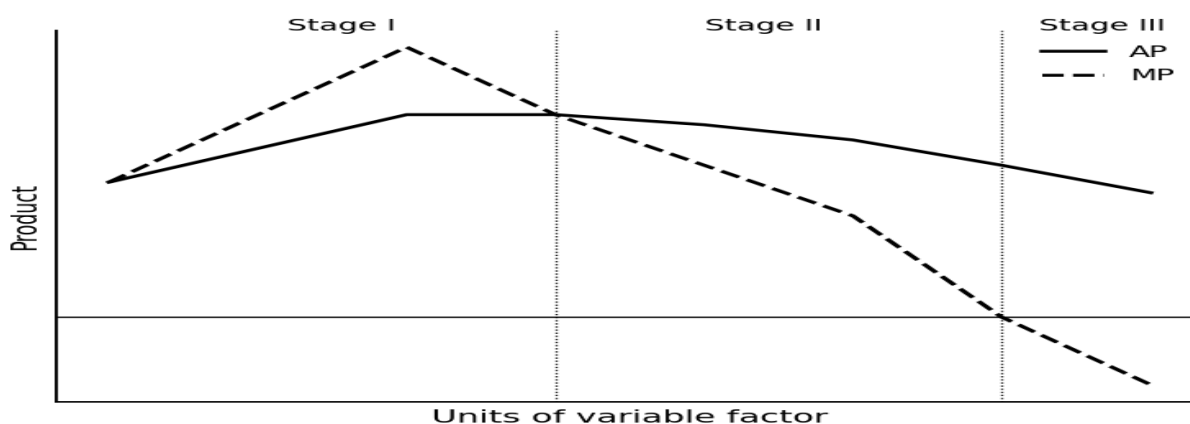
Answer: The Law of Variable Proportions states that when more units of a variable factor are combined with fixed factors, total product initially increases at an increasing rate, then at a diminishing rate, and finally may decline, assuming technology remains unchanged.

Variable factor	TP	MP	AP	Stage
1	8	8	8.0	I
2	20	12	10.0	I
3	36	16	12.0	I
4	48	12	12.0	End of I
5	57	9	11.4	II
6	63	6	10.5	II
7	63	0	9.0	End of II
8	59	-4	7.4	III

Stage I - Increasing returns to a factor: TP first rises at an increasing rate and later at a diminishing rate; AP rises and MP remains above AP. Stage I ends when AP is maximum and MP = AP.

• Stage II - Diminishing returns to a factor: TP continues to rise but at a diminishing rate; MP is positive but falling. Stage II ends when MP = 0 and TP is maximum.

Stage III - Negative returns to a factor: MP becomes negative and TP falls.



Stages of the Law of Variable Proportions

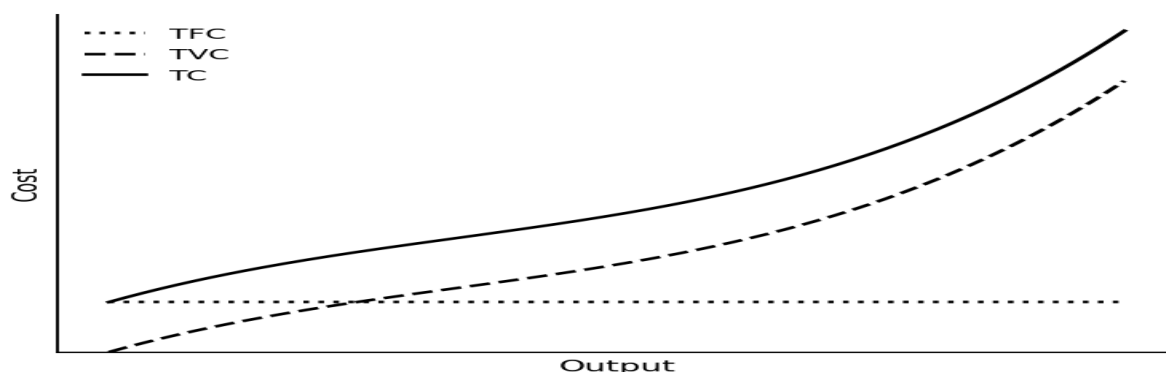
(B). Why does MP ultimately become negative?

2)

Answer: As more and more units of the variable factor are employed with fixed factors remaining unchanged, the fixed factor becomes insufficient relative to the variable factor. Overcrowding and excessive pressure on the fixed factor reduce efficiency. Eventually, an additional unit of the variable factor reduces total product, so marginal product becomes negative.

OR

Answer: (A) TFC remains constant at all output levels, so its curve is a horizontal straight line parallel to the X-axis. TVC is zero at zero output and rises with output; because of the Law of Variable Proportions it is inversely S-shaped. $TC = TFC + TVC$, so TC has the same shape as TVC but starts above the origin by the amount of TFC. The vertical distance between TC and TVC remains equal to TFC. 4)



Answer: (B) The TC curve starts from a point above the origin because fixed costs have to be incurred even when output is zero. At zero output, TVC is zero but TFC is positive; therefore, $TC = TFC$. 2)

33. (A) Substitution effect and income effect as reasons for the Law of Demand. 4)

Answer: Substitution effect: When the price of a good falls, it becomes relatively cheaper than its substitutes. Consumers substitute the cheaper good for relatively expensive alternatives, so its quantity demanded rises. When its price rises, consumers shift towards substitutes and its quantity demanded falls.

Answer: Income effect: A fall in price increases the consumer's real purchasing power, so a consumer can buy more with the same money income. For a normal good, this raises quantity demanded; a rise in price has the opposite effect. For an inferior good, the income effect works in the opposite direction, but normally the substitution effect dominates. Only in the exceptional Giffen case does this not hold.

Q33(B). "Demand for salt is inelastic, whereas demand for diamonds is elastic." Give reasons. 2)

Answer: Demand for salt is inelastic because it is a necessity, has very few close substitutes and forms a very small proportion of household expenditure.

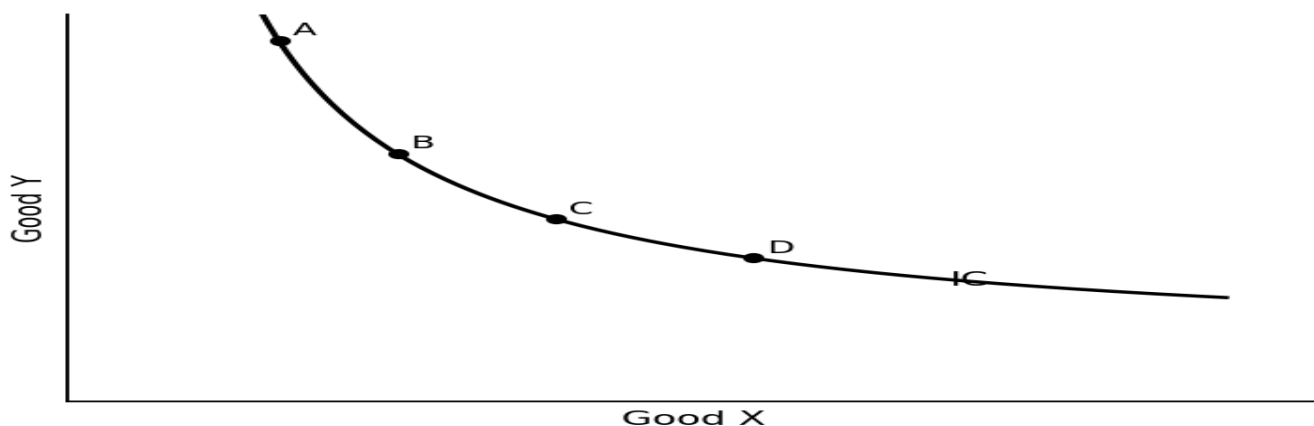
Demand for diamonds is relatively elastic because diamonds are luxury goods, their purchase can be postponed, and consumers can shift expenditure to other luxury items when their price changes.

34. (A) Meaning of Marginal Rate of Substitution (MRS) with schedule and diagram. 4)

Answer: Marginal Rate of Substitution of X for Y (MRS_{xy}) is the amount of Good Y that a consumer is willing to sacrifice to obtain one additional unit of Good X, while keeping the level of satisfaction unchanged. It is measured along an indifference curve.

Combination	Good X	Good Y	Y sacrificed for 1 more X	MRS_{xy}
A	1	15	-	-
B	2	11	4	4
C	3	8	3	3
D	4	6	2	2
E	5	5	1	1

Answer: The schedule shows diminishing MRS: as the consumer gets more X, the amount of Y he or she is willing to sacrifice for one more unit of X falls from 4 to 3 to 2 to 1.



A convex indifference curve shows diminishing MRS

Q34(B). Why does MRS go on diminishing?

2)

Answer: As the consumer substitutes X for Y, the quantity of X with the consumer increases while the quantity of Y decreases. Due to diminishing marginal utility, MU of X falls and MU of Y rises. Therefore, the consumer is willing to sacrifice progressively fewer units of Y for each additional unit of X.

Hence, $MRS_{xy} = MU_x/MU_y$ diminishes.

OR

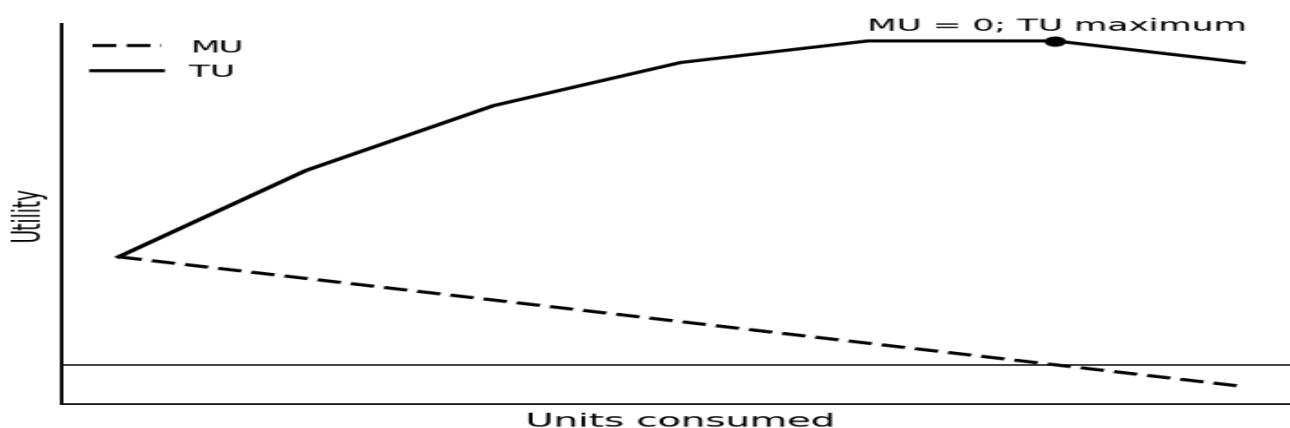
Answer: (A) The Law of Diminishing Marginal Utility states that as a consumer consumes more and more units of a commodity continuously, marginal utility from each successive unit tends to fall, other things remaining constant.

4)

Units consumed	MU (utils)	TU (utils)
1	10	10
2	8	18
3	6	24
4	4	28
5	2	30
6	0	30
7	-2	28

When MU is positive, TU rises.

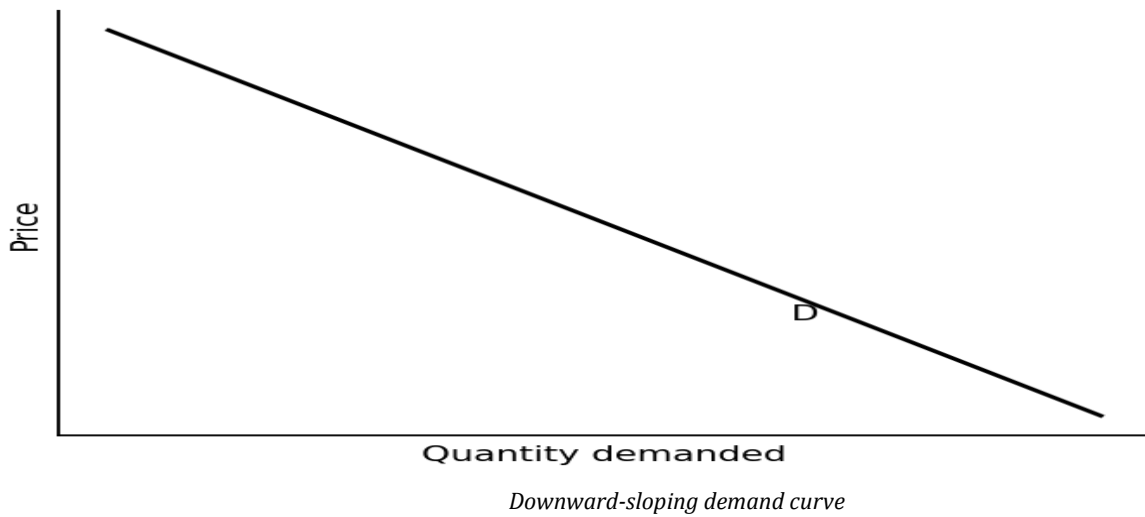
- When MU is zero, TU is maximum and constant at that point.
- When MU becomes negative, TU falls.



Answer: (B) Law of Demand:

2)

Other things remaining constant, quantity demanded of a commodity increases when its price falls and decreases when its price rises. Thus, price and quantity demanded are inversely related. Main assumptions are no change in consumer income, tastes and preferences, prices of related goods and expectations regarding future prices.



*****All The Best*****