Indian Institute of Technology, Guwahati

Mid-Semester Examination

International Economics (HS 126)

QUESTION SET A

Maximum Marks: 45 **Date & Time: 22-09-2024 (02:00 PM – 03:10 PM)**

Please write the question set code at the top of your answer booklet

Part A: Write the correct option and the corresponding answer to each question in your answer booklet.

$1 \times 36 = 36$

1. Which of the following refers to market equilibrium

A. Demand for good is equal to its supply at a particular price

B. Demand for good is greater than its supply at a particular price

C. Demand for good is less than its supply at a particular price

D. Demand for good is equal to its supply at different prices

2. A new study finds that drinking tea improves immunity. Predict the impact of this event on the equilibrium prices of tea.

A. The price of tea would rise

B. The price of tea would fall

C. The price of tea would remain unchanged

D. None of the options

3. If Eric prefers to consume tea and sugar in a fixed proportion, what should be the shape of the indifference curve for tea and sugar?

A. L-shaped

B. Straight line

C. Convex to the origin

D. Concave to the origin

4. Good A is an inferior good, an increase in income leads to:

A. a decrease in the demand for good B.

B. a decrease in the demand for good A.

C. an increase in the demand for good A.

D. no change in the quantity demanded of good A.

5. Which of the following CANNOT result in a shift of the demand curve for a good

A. A change in consumers' incomes.

B. A change in the price of the good.

C. A change in the price of a complement to the good.

D. All of the options.

6. Which of the following IS a reason for the upward sloping supply curve

A. Increasing marginal costs

B. Diminishing marginal utility

C. Substitution effect

D. Income effect

P ↓

7. Suppose you are the owner of the soft drink firm Coca Cola which competes with Pepsi in the soft drink market. Predict the effect of a fall in the price of Pepsi products in the soft drink market.

A. The demand curve for Coca Cola shifts to the right and prices of Coca Cola products rise

B. The demand curve for Coca Cola shifts to the left and prices of Coca Cola products falls

C. The supply curve for Coca Cola shifts to the right and prices of Coca Cola products rise

D. All of the options

8. What happens to the budget line if the prices of both the goods decrease in the same proportion?

A. The budget line shifts inward parallelly

B. The budget line shifts outward parallelly

C. The budget line remains unchanged

D. None of the options

9. The direct supply function is given as $Q_s = -700 + 20P$. Find the quantity supplied when price equals 60,

A. Quantity supplied equals 1200

B. Quantity supplied equals 1000

C. Quantity supplied equals 1600

D. Quantity supplied equals 500

$-700 + 20 \times 60$

$500 \; 1200$

10. Suppose you are the owner of the soft drink firm Coca Cola. Predict the effect of a fall in the price of raw materials used in the soft drink industry.

A. The demand curve for Coca Cola shifts to the right and prices of Coca Cola products rise

B. The supply curve for Coca Cola shifts to the left and prices of Coca Cola products rise

C. The supply curve for Coca Cola shifts to the right and prices of Coca Cola products falls

D. All of the options

11. The direct demand function gives us a relation between:

A. Price and quantity demanded

B. Price and quantity supplied

C. Quantity demanded and consumer expectations

D. Quantity demanded and consumer income

12. Which of the following will not cause a shift in the demand curve for DVDs?

A. a change in income

B. a change in wealth

C. a change in the price of Blu-ray discs

D. a change in the price of DVDs

13. The direct demand function is given as Q_d = 1000 - 10P. Find the quantity demanded when price equals 60,

A. Quantity demanded equals 400

B. Quantity demanded equals 1000

C. Quantity demanded equals 1600

D. Quantity demanded equals 600

14. The marginal rate of substitution between two goods tea and milk is zero regardless of the amount of tea or milk consumed. What is the shape of the consumer's indifference curve?

A. Downward sloping straight line

B. Convex to the origin

C. L-shaped

D. None of the options

15. Consider the general supply function $Q_s = 100 + 20P - 10N + 20F$, where Q_s represents quantity supplied, P represents price, N represents input prices and F represents number of sellers. Which of the following represents the direct supply function when $N = 100$ and $F = 25$.

A. $Q_s = -400 + 20P$

B. $Q_s = -700 + 20P$

C. $Q_s = 20P$

D. $Q_s = 1600 + 10P$

$100 + 20P - 1000 + 500$

$-400 + 20P$

16. If coffee and milk are complements, then which of the following will occur if the price of coffee increases

A. The quantity of coffee demanded will increase.

B. The quantity of coffee supplied will decrease.

C. The demand for milk will increase.

D. The demand for milk will decrease.

P ↑

17. Which of the following will not cause a shift in the demand curve for DVDs?

A. a change in income

B. a change in wealth

C. a change in the price of Blu-ray discs

D. a change in the price of DVDs

18. Labour shortages result in higher wages in the tea industry. Predict the impact of this event on the equilibrium prices of tea.

A. The price of tea would rise

B. The price of tea would fall

C. The price of tea would remain unchanged

D. None of the options

19. Which of the following industries exhibit the best example of a perfectly competitive market?

A. diamonds

B. athletic shoes

C. soft drinks

D. farming

20. An isocost line show:

A. Combinations of labour and capital that yields the same level of expenditure

B. Combinations of labour and capital yielding the same level of output

C. All of the options

D. None of the options

21. Consider Teleco Pvt. Ptd. which manufactures mobile handsets in the telecommunications market. Which of the following is a variable input for the firm in the short-run

A. Casual labour

B. Raw materials

C. All of the options

D. None of the options

22. What would happen if a firm under perfect competition increases its price by 10%

A. Revenue will fall to zero.

B. Revenue will fall by 10%

C. Revenue will increase by 10%

D. None of the options

23. Which of the following cost curve is a U-shaped curve

A. Average Variable Cost

B. Marginal Cost

C. All of the options

D. None of the options

24. Suppose a firm in a perfectly competitive market is incurring a losses amounting to $60,000 per month. Its fixed costs are $68,000 per month. What should the firm do in the short-run?

A. Shut-down its operations temporarily

B. Continue its operations

C. Exit from the industry

D. None of the options

$ 60 000

25. Which of the following is NOT one of the features of the perfectly competetive market?

A. Large number of buyers

B. Single seller

C. Free entry

D. No control over price

26. Perfectly competitive firms are price takers because

A. each firm is very large

B. there are no good substitutes for their goods

C. many other firms produce identical products

D. their demand curves are downward sloping

27. Higher isoquants represents

A. Higher level of output

B. Lower levels of output

C. Same level of output

D. None of the options

28. Consider Teleco Pvt. Ptd. which manufactures mobile handsets in the telecommunications market. Which of the following is a fixed input for the firm in the short-run

A. Monthly lease payment for the building during a 3-year term of lease.

B. Raw materials

C. Both of the options

D. None of the options

29. In the short-run under monopolistic competition, the firm is in equilibrium when,

A. Marginal cost curve intersects the marginal revenue curve from below

B. Marginal cost curve intersects the marginal revenue curve from above

C. Marginal cost curve intersects the average revenue curve from below

D. Average cost curve intersects the marginal cost curve from below

30. In the short-run under perfect competition, the firm is in equilibrium when,

A. Marginal cost curve intersects the marginal revenue curve from below

B. Marginal cost curve intersects the average revenue curve from below

C. Marginal cost curve intersects the price line from below

D. All of the options

31. The recipe that defines the maximum amount of output that can be produced with K units of capital and L units of labor is the:

A. Production function

B. Technological constraint

C. Research and development schedule

D. Total product

32. According to Law of Diminishing Returns, when marginal product of labour equals average product of labour

A. Total output is maximum

B. Total output is minimum

C. Average product is maximum

D. Total output is not sufficient

33. Which of the following market types has a large number of firms that sell similar but slightly differentiated products?

A. perfect competition

B. oligopoly

C. monopolistic competition

D. monopoly

34. Which of the following is NOT a reason for economies of scope

A. Joint products

B. Shared inputs

C. Labour Specialisation

D. All of the options

35. Suppose the short-run production function is Q=-25L+8LK. The firm operate in the short run with 5 units of capital. What is the marginal product of labour?

A. 15

B. 5

C. All of the options

D. None of the options

36. Total Cost = Total Fixed Cost + _____

A. Marginal Cost

B. Average Variable Cost

C. Average Cost

D. Total Variable Cost

Part B: Answer all the three questions below outlining the steps used in the calculations.

$3 \times 3 = 9$

1. Let the consumer has a Cobb-Douglas utility function as follows,

$$U = x^{0.5}y^{0.5}$$

where, x and y represent the consumption of goods X and Y.

Also, suppose that the consumer faces the following budget constraint,

$$5x + 2y = 20$$

Calculate the optimal consumption of goods X and Y.

2. Given the short-run total cost function: $TC = 2Q^3 - 15Q^2 + 30Q + 16$.

Find the level of output where AVC is minimum and show that $MC = AVC$ at that point.

3. In a perfectly competitive market, the market determined price of a product is ₹20 and the total cost functions of the firm is given by,

$$TC = Q^2 + 4Q + 20$$

Find the profit maximizing output and the maximum output.