

INDUCTORY MICROECONOMICS (CC-I)

GROUP-A

OBJECTIVE QUESTIONS

[1 MARK]

1. The cost that does not depend on number of units of output produced is _____.
2. The cost of producing an extra unit of output is called _____.
3. In the short run, _____ cost continuously decreases as output increases.
4. In case of Giffen good, ---- (positive/Negative) income effect of a price change outweighs negative substitution Effect.
5. In theory of consumption, Income Effect of inferior goods is _____.(positive/Negative)
6. Demand for foodstuff is income inelastic. This is explained by_____.
7. Reduction in the supply of a commodity due to lock down is an example of _____in supply.
8. Rise in the supply of a commodity, demand remaining unchanged, helps the equilibrium price to _____.
9. If a fall in the price of commodity X reduces the quantity demanded of commodity Y then commodity X and commodity Y will be called -----commodities.
10. At a higher wage, individual supply curve is -----bending.
11. Average Fixed Cost takes the shape of a -----.
12. During short run, industry supply curve of a competitive firm takes the shape of _____ curve.
13. In case of perfect complement commodities the shape of indifference curve is_____.
14. In case of perfect substitute commodities the shape of indifference curves is_____.
15. $MRC_{S_{xy}}$ is equal to _____ of Indifference Curve.

Ans :(1) Fixed cost,(2) Marginal cost (3)AFC,(4)Positive (5) Positive (6)Engel's Law(7)Shift(8)

GROUP-B

VERY SHORT QUESTIONS.

[2 MARKS]

1. Explain the two causes of market failure.
2. What is labor productivity?
3. Why do economists make assumption?
4. What is the difference between positive and normative statement?
5. What is production possibility frontier?
6. Why does the demand curve make downward sloping?
7. What is Giffen good?
8. What is price elasticity of demand?
9. What do you mean by price ceiling? Give one example of price ceiling.
10. What is consumer surplus?
11. What do you mean by market failure?
12. What does the invisible hand do?
13. Suppose that a market described by the following supply and demand equations.

$$Q^S=2P$$

$$Q^D=300-P$$

Solve for the equilibrium price and quantity.

14. What is meant by economic efficiency and technical efficiency?
15. What does determine the slope of production possibility curve?
16. Differentiate between change in and change in quantity demand?
17. What is meant by transitivity axiom?
18. What do you mean marginal rate of commodity substitution?
19. What is Engle's curve?
20. Define sunk cost?

GROUP-C

SHORT QUESTION

[3 MARKS]

1. How scarcities give rise to the problem of making choice?
2. Over the past 30 years, technological advances have reduced the cost of computer chips. How do you think this has affected the market for computers? For computer software? For type writers?
3. What is the determinant that affects the elasticity of demand?

4. What is cross elasticity price elasticity of demand?
5. What is the main advantage of using the mid-point method for calculating elasticity?
6. If demand is elastic, how will an increase in price change total revenue.
7. What is price elasticity of supply and what are the determinants that affect elasticity of supply?
8. Which causes a shortage of good – a price ceiling or a price floor? Justify your answer with a graph.
9. Explain why economists usually oppose controls on price.
10. What is efficiency? Is it the only goal of economic policy maker?
11. Draw a supply and demand diagram with a tax on the sale of good. Show the deadweight loss.
12. How to construct a model in economics? Give an example of economic model.
13. Define economies of scale and explain why they might arise.
14. Are market supply curves typically more elastic in the short run or in the long run?

GROUP-D

LONG QUESTION

[7 MARK]

1. Discuss about the ten principles of Economics.
2. Briefly explain what are the factors affecting demand.
3. What is the role of assumption in Economic models?
4. What is price elasticity of demand? Discuss the determinant of price elasticity of demand.
5. Write down the properties of Indifference Curve.
6. How consumers attain equilibrium in case of indifference curve analysis?
7. What happens if consumer's real income increases and derives the demand curve?
8. How and why does a firm's average total cost curve differ in the short run and long run?
9. How a competitive firm attains equilibrium in the short run?

MATHEMATICAL METHODS FOR ECONOMICS (CC-II)

GROUP-A

Fill in the blanks.

[1 mark]

1. Power set of a Null set is equal to _____.
2. xRy, yRz implies xRz , - is an example of _____ relation.
3. The shape of logarithmic function is _____.
4. If left hand limit and right hand limit exist but unequal then the type discontinuity of the function will be _____.
5. If matrix A is of order 3×2 and B is of 2×1 , then the order of AB will be _____.
6. Give an example of Scalar matrix.
7. $(A^T)^T$ is _____.
8. Limit of the sum of two functions is _____ of the Limit of two functions.
9. If $|A|_{3 \times 3}$, the rank of $|A|$ will be _____.
10. $A \Delta B$ is $(A-B)$ _____ $(B-A)$.
11. Is it possible to find inverse of a singular matrix?
12. If any two adjacent rows or columns are interchanged, then the absolute value of the determinant will remain unchanged but the sign _____.
13. Is matrix multiplication is commutative.
14. $AR/AR-MR=$ _____.
15. If $y=e^x$ then the dy/dx is _____.

GROUP-B

Very short answer questions.
marks]

[2

1. What is transaction matrix?
2. What is technological coefficient?
3. What is Hawkins-Simon condition?
4. In which case 'L' Hospital rule can be used.
5. Define a triangular matrix.

6. What is continuity function?
7. What is monotonic function?
8. What is binary number system?
9. What is the difference between domain and co-domain?
10. Examine the continuity of $1/x-1$ at $x=1$.
11. Mention the condition of continuity of a function at a point and method of finding it.
12. What is homogeneous production function?
13. What is orthogonal matrix?
14. What is the difference between inflexion point and saddle point?
15. Define cross elasticity of a function.
16. What are the conditions for maximization profit of a firm?
17. $C= 5000+100x-500x^2+2/3x^3$, find MC and AC.
18. Find elasticity of demand, $P=100-x-x^2$ at $p=17$.
19. Find the partial derivate of 2nd order of $u=2x^2+4xy+5y^2$
20. Write down the properties of homogeneous function.

GROUP-C

Short answer questions.

[3 marks]

1. Write down the Cobb-Douglas production function. Verify Euler's theorem for the function.

$$Q=AL^\alpha K^{1-\alpha}$$

2. Write down CES production function. Verify Euler's theorem for this function.

$$Q=A [\alpha K^{-\beta} + (1-\alpha) L^{-\beta}]^{-1/\beta}$$

3. What is monotonic function? State whether the following function is monotonically increasing or decreasing function.

$$P = (a - bx)^2$$

4. Find dy/dx when $y=x^x$.
5. Given the demand function $p=20/x+1$, find e_d at $p=5$.
6. $Q=96L^{0.7}K^{0.3}$. Find MPP_L and MPP_K .
7. Define transpose of a matrix and gives its properties.
8. What are the types of discontinuity?
9. Write down the geometrical interpretation of partial derivatives.
10. Verify that $Ed=AR/AR-MR$.

GROUP-D

Long answer questions.

[7marks]

1. If $Z = x^2/y^3 + y^2/x^3$ and $Z = 3x^2 + x/y$.

Find the values of f_{xx} , f_{yy} , f_{yx} and f_{xy} in each the above cases.

2. What is function? Write down different types of functions.

3. If $y(x^2+1)^{1/2} = \log(x^2+1)^{1/2}$.

Show that $(x^2+1) dy/dx + xy = 1$.

4. Find dy/dx by the first principle.

$$Y = 1/x^{1/2}$$

5. If $A = \begin{pmatrix} 4 & 7 & 6 \\ 7 & -1 & 8 \\ 3 & 4 & 2 \end{pmatrix}$ find the inverse of A. Also verify that $AA^{-1} = A^{-1}A = I$

6. Solve the following equations by using Cramer's rule.

$$3x_1 + x_2 - x_3 = 5$$

$$x_1 + 4x_2 + 2x_3 = 6$$

$$2x_1 + 3x_2 + x_3 = 4$$

7. Discuss the various properties of determinants.

8. Write down different types of matrix.

9. If $R = 1000Q - 2Q^2$; $TC = Q^3 - 59Q^2 + 1315Q + 2000$

(i) Find the level of output of maximum profit.

(ii) Find maximum profit.

10. The demand function faced by a firm is $X = 400 - 20P$ and its cost function is $C = 5X + X^2/50$.

Find the output at which the profits of the firm are maximum. Also find the price it will charge.

Also find the maximum profit.

