

F.S of BE-III (Computer Science & Engineering)

Engineering Economics (CSE 1505)

Date: 08/12/2023

Day: Friday

Time: 3.00 pm to 6.00 pm

Max Marks: 80

Notes:

1. *There is only one section and all questions must be answered in one section only.*
2. *All questions are compulsory.*
3. *Figures to the right indicate the respective marks.*
4. *Show appropriate calculations and diagrams wherever necessary.*

Q.1 Explain the fundamental economic problems with suitable examples. [10]

Q.2 Answer the following questions. [10]

- a) "Every choice has an opportunity cost and opportunity costs affect the choices people make." Justify this statement.
- b) What are the different factors of production? Explain the differences between them giving examples.

Q.3 Explain the following with suitable diagrams: [10]

- a) Various degrees of price elasticity of supply.
- b) Average Cost.

Q.4 Explain the key characteristics of a monopolistic competition market structure. How does this market structure differ from perfect competition? [10]

Q.5 Solve the following examples: [20]

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80

a) The demand for computer monitors is given by the equation $Q_d = 700 - P$, while the supply is given by the equation $Q_s = 100 + P$. In both equations P denotes the market price. Fill in the following table. At what price is the market in equilibrium?

| P | 200 | 250 | 300 | 350 | 400 |
|----------------|-----|-----|-----|-----|-----|
| Q _d | | | | | |
| Q _s | | | | | |

b) From the data about supply of alarm clocks, calculate the price elasticity of supply from: point J to point K, and point N to point P. Classify the elasticity at each point as elastic, inelastic, or unit elastic.

| Point | Price (Rs.) | Quantity Supplied |
|-------|-------------|-------------------|
| J | 8 | 50 |
| K | 9 | 70 |
| L | 10 | 80 |
| M | 11 | 88 |
| N | 12 | 95 |
| P | 13 | 100 |

c) ABC Company produces and sells widgets at a selling price of \$20 each. The variable cost per widget is \$10, and the fixed costs amount to \$30,000. Calculate the break-even point in units. Additionally, if the company sells 5,000 widgets, what is the profit or loss?

d) A company's total cost function is given by the following equation:

$$Cq = 500Q + 2Q^2$$

where, q is the quantity of units produced. Calculate the following:

- Fixed Costs
- Variable Costs at a production level of 100 units
- Marginal Cost at a production level of 100 units
- Average Variable Cost at a production level of 100 units
- Average Total Cost at a production level of 100 units

Q.6 Suppose a country's central bank is concerned about rising inflation. Describe the possible monetary policy tools and actions the central bank might undertake to address this issue.

[10]

Q.7 Answer the following:

[10]

Continue - (3)

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a) Consider a hypothetical economy. The Gross Domestic Product (GDP) at market prices is \$500 billion, and the Net National Product (NNP) at market price is \$450 billion. The depreciation (or capital consumption allowance) in the economy is \$30 billion. Calculate the Net factor Income from Abroad.

b) In a simplified economy, households and firms engage in the circular flow of income. Assume there are no government or international sectors. Describe the key components of the circular flow model.

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