

**B. E. (MECH. ENGG.) FOURTH YEAR SECOND SEMESTER
EXAM 2023**

ENGINEERING ECONOMICS AND COSTING

Marks: 100

Time: Three hours

Group A

(Answer any five)

1. Distinguish between microeconomics and macroeconomics.
Give the various reasons for shift in production possibility curve.
State the three assumptions of production possibility curve.
Explain opportunity cost. What is marginal opportunity cost?
What is marginal rate of transformation?

3+4+4+3=14
2. Define marginal utility. State the law of diminishing marginal utility.
A consumer consumes only two goods. – Explain equilibrium with
the help of utility approach.
Explain properties of indifference curve.
What is budget line? When does a budget line shift?

4+4+3+3=14
3. Define demand. Explain the factors that affect demand for a
commodity.
Explain the causes of rightward shift in demand curve of a
commodity of an individual consumer.
Differentiate between normal, inferior and giffen goods.

6+2+6=14

[Turn over]

[2]

4. Define price elasticity, income elasticity and cross elasticity of demand.

How do you measure point elasticity of demand?

Establish relationship between slope of demand curve and elasticity of demand.

3+6+5=14

5. What are the factors that determine cost of production?

Explain AFC, AVC, ATC and MC of production with the help of graphs.

6+8=14

6. Explain relationship among different revenue concepts.

Prove that MR will be always below of AR line.

State market equilibrium under perfect competition both in long and short run.

4+6+4=14

7. State the law of supply.

What is elasticity of supply? Find elasticity of supply at a point.

Give a brief discussion on different types of market.

2+6+6=14

Group B

(Answer any one)

- 8.a) Alpha industry is planning to expand its production operation. It has identified three different technologies for meeting the goal. The initial outlay and annual revenues with respect to each of the technologies as summarized as below. Suggest the best technology, which is to be implemented based on present worth

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method of comparison assuming 15% interest rate compounded annually.

	Initial Outlay in Rs.	Annual Revenue in Rs.	Life in Years
Technology 1	12,00,000	4,00,000	14
Technology 2	20,00,000	6,00,000	12
Technology 3	18,00,000	5,00,000	10

- b) A person is planning for his retired life. He has 16 more years of service. He would like to deposit 20% of his salary, which is Rs. 4000.00 at the end of the first year, and thereafter he wishes to deposit the amount with an annual increase of Rs. 500.00 for the next 15 years with an interest rate of 10%. Find the total amount at the end of the 16th year of the above series.

15+15=30

9. Journalize the following transactions, post them into Ledgers and complete the Trial Balance as on 31st March, 2023.

Jan 1, 2023	Mr. Shyam started business with Rs. 55,000/- as
Jan 2, 2023	Mr. Shyam sent Rs. 20,000/- to bank
Feb	Mr. Shyam purchased raw goods from Mr. Jatin
Mar 3,	Mr. Shyam sold finished goods to Mr. Raman of
Mar 8,	Mr. Shyam paid salary to his employees of Rs.
Mar 9,2023	Mr. Shyam paid Rs. 2,000/- electric bill to CESC

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[Note: Use of Interest Table is allowed]