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Total Number of Pages: 02

Course: B.Tech/IDD

Sub_Code: REN3E001

3rd Semester Back Examination: 2024-25

SUBJECT: Engineering Economics

BRANCH(S): ELECTRICAL & C.E, EEE, ELECTRICAL, ETC, ELECTRONICS & C.E,
MANUTECH, MECH, MINING, METTA, AEIE, CSIT, AUTO, BIOTECH, CHEM, CIVIL, ECE,
CSEDS, CST, CSEAIML, CSEAI,

Time: 3 Hours

Max Marks: 100

Q.Code: R434

Answer Question No.1 (Part-I) which is compulsory, any eight from Part-II and any two from Part-III.

The figures in the right hand margin indicate marks.

Part-I

- Q1 Answer the following questions: (2 x 10)**
- What is demand forecasting?
 - What are the basic problems of an economy?
 - State the difference between average revenue and marginal revenue.
 - What is meant by "returns to scale" Provide examples?
 - What is cost-benefit analysis in the context of public projects?
 - Why is after-tax comparison important in project evaluation?
 - What is marginal cost?
 - State one function of a commercial bank.
 - Define the concept of "store of value" as a function of money.
 - What is the difference between present worth and future worth in capital budgeting?

Part-II

- Q2 Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve) (6 x 8)**
- Explain the nature and scope of engineering economics.
 - State and explain the Law of Variable Proportion with a diagram.
 - Differentiate between microeconomics and macroeconomics with examples.
 - Discuss the nature and scope of engineering economics.
 - Differentiate between the Straight-Line Method and the Declining Balance Method
 - Discuss the factors that cause shifts in demand and supply curves and how these shifts impact market equilibrium.
 - Discuss the significance of break-even analysis in business decision-making.
 - Distinguish between short-run and long-run cost-output relationships.

- i) A product's price increases from ₹10 to ₹12, causing its quantity demanded to decrease from 100 units to 80 units. Calculate the price elasticity of demand.
- j) Describe two measures that can be used to control inflation.
- k) Write short notes on the following concepts of national income:
 - a. Gross Domestic Product (GDP)
 - b. Net National Product (NNP)
- l) Explain the income method of measuring national income.

Part-III

Only Long Answer Type Questions (Answer Any Two out of Four)

- Q3** What are the key characteristics of perfect competition? Explain how price and output are determined in both the short run and the long run in a perfectly competitive market. How does the adjustment process ensure that firms earn only normal profits in the long run? **(16)**
- Q4** A company is evaluating three different investment projects (X, Y, and Z) with the following details: **(16)**
- a) Project X: Initial investment of Rs 100,000; expected cash flows of Rs 30,000 per year for 5 years.
 - b) Project Y: Initial investment of Rs. 120,000; expected cash flows of Rs 35,000 per year for 5 years.
 - c) Project Z: Initial investment of Rs 80,000; expected cash flows of Rs 25,000 per year for 5 years.
- Calculate the NPV, IRR, and payback period for each project using a discount rate of 7%. Which project should the company choose based on your analysis?
- Q5** Discuss the concept of the time value of money (TVM) and its significance in capital Budgeting and investment analysis. Explain the purpose and construction of cash flow Diagrams in the context of capital budgeting. How do cash flow diagrams help in visualizing the timing and magnitude of cash inflows and outflows? **(16)**
- Q6** Discuss the role of central bank in a country. Suggest measures for effective role of central bank in overall development of the economy **(16)**