GIET UNIVERSITY, GUNUPUR – 765022
B. Tech (Fourth Semester Regular) Examinations, May – 2024
22BHSHS20002 - Engineering Economics and Costing
(Common for all Branches)

Time: 3 hrs   Maximum: 70 Marks

(The figures in the right hand margin indicate marks)

PART – A   **(2 x 5 = 10 Marks)**

Q.1. Answer ALL questions	CO #	Blooms Level
a. Differentiate between Technical efficiency and Economic efficiency.	CO1	K2
b. Describe the various types of returns to scale.	CO2	K1
c. Explain the reasons for estimation of depreciation of an asset.	CO3	K3
d. What is effective rate of interest?	CO3	K1
e. Distinguish between GDP and GNP.	CO4	K2

PART – B   **(15 x 4 = 60 Marks)**

Answer ALL questions	Marks	CO #	Blooms Level
2. a. Illustrate the law of Supply with limitations.	8	CO1	K3
b. Suppose that a competitive firm's total cost function is $TC = 250 + 5Q + 0.025Q^2$. If the product market price is ₹15, find the following: (i) What would be the firm's maximum profit, and at which size of production? (ii) What would be the level of output at which the firm would be in equilibrium?	7	CO1	K4
(OR)			
c. The person income is Rs.100 per day and the quantity demanded for product M is 1000 units, if the person income declines to Rs.80 per day and the quantity demanded decreases to 700 units. Find the Income Elasticity of demand.	7	CO1	K4
d. Explain the law of diminishing returns with diagram.	8	CO1	K3
3. a. How does a competitive firm attain its equilibrium in the short run under perfect competition?	8	CO2	K2
b. If the cost function C(x) of producing x quantities of a product is given by $C(x)=500x^2+2500x+ 5000$ and if each unit of the product is sold at Rs. 6000, then what are the break-even points.	7	CO2	K4
(OR)			
c. Calculate depreciation and book value of an asset for the first 5 years from the following information under declining balance method of depreciation: Cost of asset on zero period is Rs1,90,000. Salvage value is Rs 10,000 at the end of it working life of 9 years by assuming 0.2 as a fixed percentage.	7	CO2	K4
d. What is Cost Sheet? Develop a format of cost sheet with example.	8	CO2	K3
4. a. What is B/C ratio? How do you calculate B/C ratio?	7	CO3	K2
b. A person is planning for his retired life. He has 10 more years of service. He would like to deposit 20% of his salary, which is Rs. 10,000, at the end of the first year and thereafter he wishes to deposit the same amount (Rs. 10,000) with an annual increase of Rs. 2,000 for the next 9 years with an interest rate of 20%. Find the total amount at the end of the 10th year of the above series.	8	CO3	K5
(OR)			

c.	Two mutually exclusive projects are being considered for investment. Project A1 requires an initial outlay of Rs. 30,00,000 with net receipts estimated as Rs. 9,00,000 per year for the next 5 years. The initial outlay for the project A2 is Rs. 60,00,000, and net receipts have been estimated at Rs. 15,00,000 per year for the next seven years. There is no salvage value associated with either of the projects. Using the AEW benefit cost ratio, which project would you select? Assume an interest rate of 10%.	8	CO3	K6
d.	What is IRR? Explain the methods for calculating IRR with a suitable example.	7	CO3	K3
5.a.	What do you mean by Inflation? State the various degrees of inflation.	7	CO4	K2
b.	What is commercial Bank? Explain the primary function of a commercial bank.	8	CO4	K1

(OR)

c.	Explain the various components of Indian Financial System.	8	CO4	K2
d.	Explain the different methods of measuring national income.	7	CO4	K3

--- End of Paper ---