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Roll No. 2421/CO/145

Vth Semester

B.Tech.

End Term Examination

Nov./Dec.- 2023

HU 301 Engineering Economics

Time- 3.00 hrs

Marks- 50

- Note: 1. Answer any five questions.
2. All questions carry equal marks.
3. Assume missing value, if any

- 1 a Discuss salient feature of the Indian economy. [5][CO#1]
b The accounts of ABC manufacturing LTD. for the [5][CO#2]
year ended 31st March 2023 shows following:

Particular	Rs.
Stock of Material on 01.4.2022	87,200
Materials purchased	369000
Drawing office salaries	40000
General office salaries	15000
Bad debts written off	12000
Salesperson's salary & commission	17000
Depreciation written off of furniture	10000
Rent, tax and insurance of factory	41900
Productive Wages	176400
General expenses	40000
Gas and water (factory)	2680
Travelling expenses	2680
Managers Salary	75000
Depreciation of plants and tools	9,100
Cash discount allowed	4060
Repair pf plats and tools	6230
Carries outwards	6030
Direct expenses	10010
Rent, taxes, insurance (office)	2800
Gas, water (office)	560
Stock of material 31.3.2023	87920

Prepare cost seat for the year ending 31.3.2023

- 2 a Think one product of the Indian market whose market is oligopoistic and one product whose market is monopolistic competition. Discuss reasons for your decision. [5][CO#3]

- b A mall owner is taking stock of his expenditure on advertisement. It has increased its expenditure from 50 thousand to Rs. 75 thousand each on advertisement of commodity X1 and X2. Statistics on its pre and post advertisement sell is given below: [5][CO#1]

Commodity	Pre-advertisement sell	Post advertisement sell
X1	3 lakh	3.12 lakh
X2	5 lakh	7.70 lakh

Find out their advertisement elasticity and nature of X1 and X2.

- 3 a You are CEO of a company and you have to decide a foreign location where you would like to expand your business. Discuss factors you would like to consider for taking decision. [5][CO#3]

- b If price of A changes from 20 to 25 per unit, following are the detail of demand of A, B and C. Calculate the Cross Elasticity of Demands and find the relation between the commodity A, B and C. [5][CO#2]

Commodity	Demand	
	Original	Changed
A	100	80
B	120	150
C	200	160

- 4 a What do you mean by opportunity cost? How it is different from actual cost? Discuss with examples [2+3=5] [CO#2]
- b A small business with an initial investment of Rs. 12,000 yields Rs. 10,000 during the first year of operation and the yield increases by Rs. 1,000 from its second year of operation up to its 10th year of operation. At the end of life of the business, the salvage value is zero. Find the present worth of the business by assuming an interest rate of 18%, compounded annually. [5][CO#2]

- 5 a You are Governor of the Central Bank, country ABC. The inflation rate has become 9. Is it a matter of concern? What fiscal and monetary measures may be taken and why? Discuss with examples. [5][CO#3]

- b A man owns a corner plot. He must decide which of the two alternatives to select in trying to obtain a desirable return on his investment. After much study and calculation, he decides that there are two best alternatives. Details are given below: [5][CO#2]

	Build Gas station	Build Ice-cream stand
Initial Investment (in Rs)	20,00,000	36,00,000
Annual Property Tax (in Rs.)	80,000	1,50,000
Annual Income (in Rs)	8,00,000	9,80,000
Life of Building (in Years)	20	20
Salvage Value (value which owner may receive after completing life) (in Rs.)	0	0

Evaluate the alternative based on the future worth method.

- 6 a What do you mean by Online work? Is it good or bad type of employment? Whether engineering students should be encouraged to do it? Discuss with examples. [5][CO#3]

- b A company invests in one of the two mutually exclusive alternatives. The life of both alternatives is estimated to be 5 years with the following initial investments, annual return and [5][CO#2]

salvage value (money received after selling the machine at the end of its operational life)

	Alternative A	Alternative B
Initial Investment (in Rs.)	1,50,000	1,75,000
Annual Equal Return (in Rs.)	60,000	70,000
Salvage value (in Rs.)	15000	35000

Determine the best alternative based on the annual equivalent method when rate of interest is 25%.

- 7 a What do you understand by Recession? Discuss its effect on producers, employees of a manufacturing firm and students.

[2+3=5][CO#2]

- b Excel manufacturing firm to expand its production operation. It has identified three different technologies for meeting the goal. The initial investment and annual expenditure with respect to each of the technologies is given below.

[5][CO#3]

*	Initial Investment (in Rs)	Annual Maintenance cost	Life (in years)
Technology 1	12,00,000	4,00,000	10
Technology 2	20,00,000	6,00,000	10
Technology 3	18,00,000	5,00,000	10

Suggest the best technologies which is to be adopted based on the present worth method of comparison assuming 20% interest rate compounded annually.