

CBCS SCHEME

USN

--	--	--	--	--	--	--	--	--	--

BAU654D

Sixth Semester B.E./B.Tech. Degree Examination, June/July 2025 Engineering Economics

Time: 3 hrs.

Max. Marks: 100

- Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M : Marks , L: Bloom's level , C: Course outcomes.
3. Use of discrete compound interest factor tables is allowed.*

Module – 1			M	L	C												
Q.1	a.	Explain the concept of problem solving and decision making based on scientific method.	10	L2	CO2												
	b.	Discuss the significance of intuition and analysis and differentiate between them.	10	L3	CO3												
OR																	
Q.2	a.	Define law of returns and mention its two limitations and applications.	10	L2	CO2												
	b.	Find the effective interest rate if the rate of interest is 6% when compounded : i) Yearly ii) Biannually iii) Quarterly iv) Monthly v) Daily vi) Basis	10	L3	CO3												
Module – 2																	
Q.3	a.	List and discuss the conditions for present worth comparisons.	8	L2	CO2												
	b.	Two holiday cottages are under consideration. Compare the present worth of the cost of 24 years service at an interest rate of 5%. When neither cottage has a realizable salvage value. <table border="1"><tr><td></td><td>Cottage 1</td><td>Cottage 2</td></tr><tr><td>First cost</td><td>Rs.4500</td><td>Rs.10000</td></tr><tr><td>Estimated life</td><td>12 years</td><td>24 years</td></tr><tr><td>Annual maintenance cost</td><td>Rs.1000</td><td>Rs.720</td></tr></table>		Cottage 1	Cottage 2	First cost	Rs.4500	Rs.10000	Estimated life	12 years	24 years	Annual maintenance cost	Rs.1000	Rs.720	12	L3	CO3
	Cottage 1	Cottage 2															
First cost	Rs.4500	Rs.10000															
Estimated life	12 years	24 years															
Annual maintenance cost	Rs.1000	Rs.720															
OR																	
Q.4	a.	Elaborate on prominent methods to compare assets that have unequal lives.	8	L2	CO2												
	b.	Two motor cycles of brand A and B are available on the following terms: i) Motor cycle A – Make a down payment of Rs.5000 and then Rs.6000 at the end of each year for 7 years. ii) Motor cycle B – Make a down payment of Rs.15000 and no payment for the next 3 years. From end of 4 th year annual payments of Rs.12000 for the next 3 years. Draw CFD and compare the alternatives on future worth basis. Assume i = 10% compounded annually.	12	L3	CO3												

1 of 3

Module – 3

Q.5	a.	Discuss three typical situations for equivalent annual worth comparisons.	10	L3	CO3															
	b.	Two power converters Brand X and Brand Y are to be considered for purchase. Using the following estimate at 10% interest rate, determine the annual equivalent cost of the two systems. <table><tr><td>Cost particulars</td><td>Brand X</td><td>Brand Y</td></tr><tr><td>Purchase price</td><td>Rs.10000</td><td>Rs.25000</td></tr><tr><td>Estimated service life</td><td>5 years</td><td>9 years</td></tr><tr><td>Salvage value</td><td>Rs.3000</td><td>Rs.5000</td></tr><tr><td>Annual operating cost</td><td>Rs.2500</td><td>Rs.1200</td></tr></table>	Cost particulars	Brand X	Brand Y	Purchase price	Rs.10000	Rs.25000	Estimated service life	5 years	9 years	Salvage value	Rs.3000	Rs.5000	Annual operating cost	Rs.2500	Rs.1200	10	L4	CO4
Cost particulars	Brand X	Brand Y																		
Purchase price	Rs.10000	Rs.25000																		
Estimated service life	5 years	9 years																		
Salvage value	Rs.3000	Rs.5000																		
Annual operating cost	Rs.2500	Rs.1200																		

OR

Q.6	a.	A company plans to purchase a truck with an operator platform to reduce labour cost for sign installations by Rs.1.5 lakh per year. The price of the truck is Rs.9.3 lakhs with an additional operating cost of Rs.2500 per month. The resale value is Rs.1.8 lakhs in 8 years. Should the truck be purchased considering 7% interest rate?	10	L4	CO4
	b.	Write a brief note on 'Consideration of Asset Life' and 'Sinking Fund Usage'.	10	L3	CO3

Module – 4

Q.7	a.	Define costing. Discuss aims and objectives of costing and costing procedure.	10	L2	CO2
	b.	A firm is producing 100 units/day. The direct material and direct labour costs are Rs.160 and Rs.200 respectively. The factory overhead chargeable is Rs.250. If the selling expenses are 40% of factory cost what is the selling price to realize a profit of 15% of selling price?	10	L3	CO3

OR

Q.8	a.	What is depreciation? Discuss any six causes of depreciation. Explain sinking fund method of depreciation.	10	L2	CO1
	b.	Initial cost of a machine is Rs.25000/- and it will have a salvage value of Rs.2000/- after a period of 6 years. Using declining balance method calculate the book value of the machine at the end of each year. Plot a graph of depreciation fund v/s number of years.	10	L3	CO3

Module – 5

Q.9	a.	Explain the following with reference to financial statements: i) Marketable securities ii) Book debts iii) Long term liabilities iv) Intangible fixed assets.	10	L2	CO2
	b.	Discuss briefly on sources of finance covering both internal and external sources.	10	L3	CO3

OR

Q.10	a.	Differentiate between a 'balance sheet' and 'profit and loss account'.	8	L2	CO2
	b.	A company XYZ financial status as on 31/03/25 is given below. Prepare a balance sheet as on 31 March 2025. Sundry debtors : Rs.200000 Cash in hand : Rs.120000 Bank loans : Rs.400000 Bills payable : Rs.200000 Equity shares : Rs.1130000 Land and building : Rs.400000 Plant and machinery : Rs.100000 Inventories : Rs.150000 Creditors : Rs.300000 Bank balance : Rs.160000	12	L3	CO3
