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Sixth Semester B.E. Degree Examination
Process Engineering Economics and Management

TIME: 03 Hours

Max. Marks: 100

- Note: 01. Answer any **FIVE** full questions, choosing at least **ONE** question from each **MODULE**.
02.
03.

Module -1			*Bloom's Taxonomy Level	Marks
Q.01	a	Mention and explain complete stages involved in complete process plant design	L2	8
	b	Briefly explain the various factors to be considered for the site selection of a typical chemical plant	L2	6
	c	What are the various steps involved in preparation of plant layout	L1	6
OR				
Q.02	a	Explain the feasibility study for chemical process plant	L2	10
	b	Explain the literature survey and development of flow sheets	L2	10
Module-2				
Q. 03	a	Enumerate fixed capital investment components for chemical plant	L2	12
	b	A small scale chemical plant producing 100 bags of intermediate chemical per day. The direct material cost is found to be Rs 160, labor cost is Rs 200 and factory overheads are Rs 250. If the marketing cost is 40% of factory cost, what must be the selling price of each bag to realize a profit of 14.6% of selling price	L3	8
OR				
Q.04	a	Discuss factors affecting investment and production cost	L2	7
	b	Discuss the cost indices	L2	5
	c	It is desired to borrow Rs 10000 to meet financial obligation at the interest rate of 2%. Determine the following. Determine The total amount of principal plus simple interest due after 2 years The total amount of principal plus compound interest due after 2 years The nominal interest rate when the interest is compounded monthly The effective interest rate when the interest is compounded monthly	L3	8
Module-3				
Q. 05	a	Explain depreciation. Discuss the methods for calculation of depreciation	L2	10
	b	The original cost for distillation tower is Rs 50000 and the useful life of the tower is estimated to be 10 years. How much must be placed annually in an annuity at the interest rate of 6% to obtain sufficient funds to replace the tower at the end of 10 years?. If the scrap value of distillation tower is Rs 5000, determine the asset value at the end of 5 years based on straight line depreciation	L3	10
OR				
Q. 06	a	Explain current value, salvage value and recovery period	L2	8
	b	Explain Profitability. Discuss return on investment, payback period method for calculating profitability	L2	12
Module-4				
Q. 07	a	Explain the theories of replacement	L2	10
	b	What are the causes and types of replacement	L2	10
OR				
Q. 08	a	Explain the theory of alternate investments	L2	10
	b	Discuss the causes for alternate investments	L2	10
Module-5				

Q. 09	a	Explain financial statements and cash flow diagrams	L2	12
	b	Explain the break even analysis	L2	8
OR				
Q. 10	a	Discuss design reports and types of design reports	L2	10
	b	What is organization and purpose of design report	L2	10

*Bloom's Taxonomy Level: Indicate as L1, L2, L3, L4, etc. It is also desirable to indicate the COs and POs to be attained by every bit of questions.