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06ME56

Fifth Semester B.E. Degree Examination, December 2011

Engineering Economics

Time: 3 hrs. Max. Marks:100

Note: 1. ***Answer any FIVE full questions, selecting at least TWO questions from each part.***
2. ***Use of compounding interest factors tables is permitted.***

PART – A

1 a. Differentiate between tactics and strategy. **(05 Marks)**

b. Explain the law of returns. **(05 Marks)**

c. State and explain the reasons for charging interest from the borrower's point of view and lender's point of view with cash flow diagram (CFD). **(10 Marks)**

2 a. State and explain the conditions of present worth comparisons. **(08 Marks)**

b. What nominal interest rate compounded monthly yields an effective annual rate of 19.56 percent? **(04 Marks)**

c. Machine 'A' has first cost of Rs.9000, has no salvage value at the end of 6 year useful life, and annual operating cost of Rs.5000. The machine 'B' costs Rs.16000 new and has an expected resale value of Rs.4000 at end of its 9 year economic life. Operating costs for machine 'B' are Rs.4000 per year. Compare the two alternatives on the basis at their present worths, using the repeated projects assumption at 10 percent annual interest rate with CFD. **(08 Marks)**

3 a. Briefly explain the following terms as applied to assets life :
i) Service life ii) Accounting life iii) Economic life. **(10 Marks)**

b. A stand by electric power generator was purchased 6 years ago for Rs.8000, at that time it was expected that the equipment would be used for 15 years and would have a salvage value of 10 percent of the first cost. The generator is no longer needed and is to be sold for Rs.2500. Using an interest rate of 15 percent, determine the difference between the anticipated and actual equivalent annual capital costs. **(10 Marks)**

4 a. What is depreciation? List the causes of depreciation. **(04 Marks)**

b. A machine purchased for Rs.80000. Its estimated life is 10 years and its scrap value is Rs.20000. If the depreciation is charged according to declining balance method, determine the percentage by which the value of machine should be reduced every year and also determine amount of depreciation fund and book-value at the end of 5^{th} year. **(08 Marks)**

c. In 2004 a small apartment was purchased for Rs.2,00,000. Receipts from rent have received Rs.30,200 a year; taxes maintenance and repair costs have totaled Rs.8620 annually. The owner intends to hold the property until she retires in 2014. If at that time property sells for Rs.2,00,000, what rate of return will be obtained on the investment? **(08 Marks)**

PART – B

5 a. Explain briefly the standard cost and the marginal cost. **(04 Marks)**

b. Explain briefly the components of cost. **(06 Marks)**

5 c. A factory making CFL tubes in batches 1000. The direct material cost of these 1000 pieces is Rs.1600 and direct labour cost Rs.2000. The factory on cost is 35 percent of total material and labour cost. Selling and distribution overhead charges are 20 percent of factory cost. If the management wants to make a profit of 20 percent on gross cost, determine the selling price of each tube. **(10 Marks)**

6 a. Differentiate between profit and loss account and balance sheet. **(08 Marks)**

b. Prepare the profit and loss account for the given data. Find the net profit for ordinary shares, profit before taxes and reserves surplus at 31st March 2010.

	Rs. (lakhs)
Sales (cash)	2,80,000
Credit sales	11,20,000
Cost of goods sold	8,40,000
Selling and administrative expenses	1,40,000
Depreciation	98,000
Interest on long term loan	42,000
Taxes	1,40,000
Preferred dividend	17,000
Reserves and surplus at 1st April 2009	1,82,000
Dividend paid to equity shares	25,000

(12 Marks)

7 a. List and explain various financial ratios. **(12 Marks)**

b. What are the essentials of profit planning and financial planning? **(08 Marks)**

8 a. List the objectives of budget and budget control. **(08 Marks)**

b. Explain briefly :

i) Sales budget

ii) Production budget

iii) Master budget. **(12 Marks)**

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