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06ME56

Fifth Semester B.E. Degree Examination, Dec.2014/Jan.2015

Engineering Economics

Time: 3 hrs.

Max. Marks:100

- Note: 1. Answer FIVE full questions, selecting at least TWO questions from each part.**
2. Use of interest factor tables is allowed.

PART - A

- 1 a. Explain the law of demand and supply. (05 Marks)
 b. How much less would it cost to pay off a Rs.3000 loan in 1 year with 12 equal payments when interest is 12% compounded monthly, as opposed to making a single payment when effective interest rate is 12 percent. (05 Marks)
 c. Service records for a specific piece of production equipment indicate that a replacement machine will have first year maintenance costs of approximately Rs.1000 and that these cost will increase by Rs.200 per year for each additional year of service. Assuming the equipment is to be in service for 10 years and using an interest rate of 15 percent, determine the maximum amount that should be paid for a life time maintenance contract at the time the equipment is purchased. (10 Marks)
- 2 a. Explain the conditions for present worth comparisons. (06 Marks)
 b. An investor can make three end of year payments of Rs.30,000 which are expected to generate receipts of Rs.20,000 at the end of year 4 that will increase annually by Rs.5000 for the following 4 years. If the investor can earn a rate of return of 20 percent on other 8 year investment, is this alternative attractive? (14 Marks)
- 3 a. Explain the situations for equivalent annual worth comparisons. (06 Marks)
 b. You apply to your local bank for a loan of Rs.15000. The prevailing annual interest rate is 8 percent, and you are to pay off the loan in 5 equal end of year payments. Determine the total interest that you will pay over the five years period. (08 Marks)
 c. Define the following with respect to life of an asset:
 i) Ownership life
 ii) Accounting life
 iii) Economic life (06 Marks)
- 4 a. Explain the concept of cost of capital. (03 Marks)
 b. Explain the causes of declining value of an asset. (10 Marks)
 c. An asset cost was Rs.400 when purchased 4 years ago. A scrap value of Rs.50 was expected at the end of 7 years useful life. Determine the depreciation charge during the coming year and assets current book value by (i) straight line method, (ii) declining-balance depreciation (using salvage value to determine depreciation rate). (07 Marks)

PART - B

- 5 a. Explain the necessity of cost accounting. (10 Marks)
 b. Explain in brief various components of cost to arrive at selling price of a manufactured product. (10 Marks)

- 6 a. Explain various functions of finance. (05 Marks)
 b. Prepare profit and loss account and balance sheet from following balances for the ending year 31st December 2007.

Capital = 10000,
 Return outwards = 500,
 Bills payable = 500,
 Sundry debtors = 2400
 Purchases = 10,500
 Wages = 5000
 Repairs = 50
 Rent = 400
 Trade expenses = 700
 Carriage = 150
 Adjustments:

Creditors = 1200
 Sales = 16400
 Plant and machinery = 4000
 Drawing = 1000
 Return inwards = 300
 Bank = 1000
 Stock (1-1-2007) = 2000
 Manufacturing expenses = 800
 Bad debts = 200
 Fuel and power = 100

Closing stock was valued at Rs.1450
 Depreciate plant and machinery = Rs.400
 Allow 5% interest on capital.
 A sum of Rs.40 is due for repairs.

(15 Marks)

- 7 a. How do you interpretate various types of current ratio? (10 Marks)
 b. List implications of high and low debt equity ratio of a firm. (10 Marks)
- 8 a. List out various facets of financial planning. (10 Marks)
 b. Describe various types of budgets. (10 Marks)

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