

# CBCS SCHEME

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15ME51

## Fifth Semester B.E. Degree Examination, Aug./Sept.2020 Management and Engineering Economics

Time: 3 hrs.

Max. Marks: 80

- Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.  
2. Use of Interest table is permitted.*

### Module-1

- 1 a. Define Management. Explain functional areas of management. (08 Marks)  
b. Describe briefly role of Management. (08 Marks)

OR

- 2 a. Define planning and explain nature of planning. (08 Marks)  
b. Describe steps in planning and planning premises. (08 Marks)

### Module-2

- 3 a. List the different types of organizations and explain briefly Functional organization, Line and Staff organization. (08 Marks)  
b. Describe briefly processes of selection for recruitment. (08 Marks)

OR

- 4 a. List and explain different leadership styles. (08 Marks)  
b. Describe briefly steps in controlling process. (08 Marks)

### Module-3

- 5 a. Explain Problem Solving and Decision Making. (05 Marks)  
b. Explain law of returns. (05 Marks)  
c. A product has a demand of 3000 units when priced at Rs.100/unit. When the price is reduced at Rs.80/unit the sales increases to 3800 units.  
(i) Find whether the demand is elastic or inelastic.  
(ii) At what quantity of sales can the demand be called elastic or inelastic? (06 Marks)

OR

- 6 a. A person takes a loan of Rs.10,000 from a bank of interest of 10% P.A. Find the amount if  
(i) Interest is compounded annually  
(ii) Interest is compounded half yearly  
(iii) Interest is compounded quarterly  
(iv) Interest is compounded monthly. (08 Marks)  
b. Explain cash flow diagram lender point of view and borrow point of view. (04 Marks)  
c. If a person deposited Rs. 25000 into a saving account that earn 12% per year, what uniform annual amount could be withdrawn at the end of each year for 10 years. (04 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and/or equations written eg. 42+8 = 50, will be treated as malpractice.

**Module-4**

- 7 a. Explain briefly conditions for present worth comparison (06 Marks)  
 b. Company is evaluating three robots for possible use in its assembly operating data associated with robots are as follow:

Particulars	Robot A	Robot B	Robot C
First Costs (Rs.)	55000	58000	53000
Operating and maintenance costs (Rs.)	3000/year	4500/year	4000/year
Expected incomes (Rs.)	44000/year	44000/year	38000/year
Expected salvage value (Rs.)	4000	6000	4000

All values in rupees. Assuming a technological life of 3 years and a desired interest rate of 12% which robot seems to be preferable assuming all other factors are equal? Use net present worth evaluation. (10 Marks)

**OR**

- 8 a. A plot can be purchased for Rs. 13,80,000 company A offers a loan at 7.5% nominal interest to be compounded monthly. If a down payment of Rs. 25,000 is paid initially. The loan is to be paid off in 15 years. Company B offers 20 years repayment period with the same down payment but the nominal interest rate is 9% compounded monthly. Evaluate the monthly payment for the above two alternatives. (10 Marks)  
 b. Briefly explain Minimum Acceptable Rate of Return (MARR), IRR, ERR. (06 Marks)

**Module-5**

- 9 a. Explain how selling price of components / Products are fixed. (06 Marks)  
 b. A small firm is producing 100 pens per day. The direct material cost is found to be Rs. 160. Direct labour cost Rs. 200 and factory overheads chargeable to it Rs. 250. If the selling on cost is 40% of the factory cost. What must be the selling price of each pen to realize a profit of 14.6% of the selling price. (05 Marks)  
 c. An article can be made either by hand or in large quantity by mass production. If the former case, time taken is 3 hrs and overheads are 25% of labour cost, while in the later case time takes for 10 pieces is 8 hours but overheads are 150% of labour cost. Material cost is Rs. 1.50/piece and labour charges are Rs.0.80/hr. Compare the total cost in both the cases. (05 Marks)

**OR**

- 10 a. What is depreciation explain the causes of depreciation. (06 Marks)  
 b. A lathe is purchased for Rs.8,00,000 and assumed life is 10 years and scrap value is Rs.2,00,000. If the depreciation is charged by (i) Diminishing balance method – Depreciation fund after 2 years. (ii) Straight line method of depreciation (iii) SOYD method – for 4 years. (10 Marks)

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