

4E 4144**B.Tech. IV Semester (Main/Back) Examination, May-2018****Mechanical Engg.****4ME5A Industrial Engineering****AE.ME****Time : 3 Hours****Maximum Marks : 80****Min Passing Marks : 26**

Attempt any five questions, selecting one question from each unit. All Questions carry equal marks. Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly. Units of quantities used/calculated must be stated clearly.

Unit - I

1. a) Define Industrial Engineering and discuss the contributions of earlier pioneers to its developments. (8)
- b) Define work study and explain its role in improving enterprise productivity. (8)

OR

1. a) Explain (any two) following recording techniques.
- i) Man-machine chart
 - ii) SIMO chart
 - iii) Flow diagram (8)
- b) State the objectives of method study and explain the steps involved in method study procedure. (8)

Unit - II

2. a) Define decision making. Discuss the various steps involved in decision making. (8)
- b) Discuss the various functions of management. Which of these functions are more human oriented? (8)

OR

2. a) Fredrick W. Taylor is known as father of Scientific Management in terms of improving efficiency and productivity. Do you agree with his philosophy? Give reasons for your views either Pro or against his philosophy. (8)
- b) Write a short note on "reactions and criticisms" of Fayol and Mayo. (8)

Unit - III

3. a) What is meant by Joint Stock Company? Discuss briefly the various procedures for forming a Joint Stock Company. (10)
- b) List out the Advantages and Limitations of a public limited company when compared with a private limited company. (6)

OR

3. a) What is an organization? List various types of organizational structures and discuss two in detail with examples. (8)
- b) Explain "Span of Control" (Graicuna's theory), with a suitable example (8)

UNIT-IV

4. a) Write a short note with example on "Profit and Loss statements" and Balance sheet". (8)
- b) What is working captial and detailed its sources? What are the factors that influence the working capital? (8)

OR

4. Write short note on (any four)

- i) Cash flow diagrams
- ii) Payback Period Comparisons
- iii) Internal Rate of Return
- iv) Future Worth Comparison
- v) Time Value Equivalence

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(16)

UNIT -V

5. a) The price of electronic office equipment is Rs. 250,000 and the salvage value at the end of 10 years is Rs. 50,000. Calculate the unamortized value after 5 years by:

i) Sinking fund method

ii) Sum of years digits (S-Y-D) method

Take rate of interest equals to 8% (8)

b) Define Depreciation. Explain the purpose of depreciation calculation. Classify the types of Depreciation. (8)

OR

5. a) Describe the Break-Even chart with its limitations and specific uses. State the assumptions made while plotting the Break-Even chart. (8)

b) The fixed cost for the year 1987-90 are Rs. 8,00,000 and variable cost per unit is Rs. 30. The estimated sales for the period are valued at Rs. 24,00,000. Each unit sells at Rs. 180 each.

i) Find B.E.P (in sales).

ii) If Rs. 18,00,000 will be the likely sales turn over for the next budget period, calculate the estimated contribution and profit. (8)

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