17ME51

USN

Fifth Semester B.E. Degree Examination, July/August 2021
Management and Engineering Economics

Time: 3 hrs.   Max. Marks: 100

Note: 1. *Answer any FIVE full questions.*
2. *Use of Interest chart is permitted.*

1   a. Define Management. List and explain different interpersonal roles played by a Senior Manager. **(08 Marks)**
    b. Briefly explain Management and Administration. **(04 Marks)**
    c. List and explain important contributions made by F.W. Taylor under Scientific Management. **(08 Marks)**

2   a. Compare Strategic planning and Tactical planning. **(04 Marks)**
    b. Explain briefly the guidelines for making planning effective. **(06 Marks)**
    c. Identify the situations for Individual and Group decisions. Briefly explain the advantages and disadvantages of Group decision. **(10 Marks)**

3   a. What is Span of Control? Briefly explain the factors governing the span of control. **(06 Marks)**
    b. What do you mean by a Committee? How are they broadly classified? Briefly explain. **(04 Marks)**
    c. Briefly explain the Selection Procedure. **(10 Marks)**

4   a. Briefly explain the essentials of Effective Control System. **(08 Marks)**
    b. Explain the important characteristics of leadership. **(04 Marks)**
    c. Define Communication. List some of the important purposes of communication. **(08 Marks)**

5   a. With a neat block diagram, explain the process of problem solving and decision making in Engineering Economics. **(10 Marks)**
    b. Explain Law of Demand and Supply with suitable example. **(06 Marks)**
    c. Define the Law of Return and explain the three phases of Law of return. **(04 Marks)**

6   a. Define Compound Interest. Briefly explain the three types of Compound Interest. **(06 Marks)**
    b. With a neat diagram, explain Cash Flow diagram. **(06 Marks)**
    c. A person wants to give Rs 25,000 as scholarship every year in memory of his late father. He wants to deposit a lump sum in the bank which makes him to receive the required amount every year for the next 20 years. The reserve is assumed to grow annually at the rate of 9%. Find the single payment that must be made now as the reserve amount. **(08 Marks)**

7   a. How are assets with unequal lives compared? **(05 Marks)**
    b. Explain the "Rule of 72" as applied to Present worth comparisons. **(05 Marks)**
    c. Compare the Present worth of the following alternatives using an interest rate of 7% :

	Plan A	Plan B	Plan C
Life Cycle (years)	6	3	4
First cost (Rs)	2,000	8,000	10,000
Annual cost (Rs)	3,200	700	500

(10 Marks)

8 a. Explain i) Ownership life   ii) Accounting life   iii) Economic life. **(06 Marks)**

    b. Explain : i) MARR   ii) IRR. **(04 Marks)**

    c. A patch of land adjacent to International Airport is likely to increase in value. The cost of the land now is Rs 8,00,000 and expected worth is Rs 15,00,000 within 5 years. During the period it can be rented for a small Industry at Rs 15,000 per year. Annual taxes are Rs 8,500 and likely to remain constant. What rate of return will be earned on the investment if the estimates are accurate? **(10 Marks)**

9 a. Differentiate between Estimation and Costing. **(04 Marks)**

    b. Explain the following terms :
    i) Prime cost   ii) Factory cost   iii) Cost of Production   iv) Total cost. **(06 Marks)**

    c. Two operators are engaged on forging machine for 25 jobs, each weighing 4 kg in a shift of 8 hrs. They are paid at the rate of Rs 100/hr and Rs 80/hr per day. The forged material costs Rs 3.50 per kg. If the factory and administrative on costs put together are twice the labour cost , find the cost of production per unit. **(10 Marks)**

10 a. What is Depreciation? List different methods of determining depreciation. Explain any two of them. **(10 Marks)**

    b. A Company has purchased an equipment whose first cost is Rs 2,00,000 with an estimated life of eight years. The estimated salvage value of the equipment is Rs 40,000 at the end of its lifetime. Determine the depreciation change and book value at the end of various years using sum of years digits method of depreciation. **(10 Marks)**

* * * * *