USN | | | | | | | | | |

17ME51

Fifth Semester B.E. Degree Examination, Jan./Feb. 2021
Management and Engineering Economics

Time: 3 hrs.   Max. Marks: 100

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

Module-1

1   a.   Explain various functions of Management.   **(10 Marks)**
      b.   Define Planning. Discuss steps commonly used in planning.   **(10 Marks)**

OR

2   a.   Explain principles of Management as formulated by Fayol.   **(10 Marks)**
      b.   Explain the various steps in a decision making process, with a block diagram.   **(10 Marks)**

Module-2

3   a.   Explain the staff selection process in an organization listing the steps involved in the selection.   **(10 Marks)**
      b.   Define Leadership. List the basic styles of leadership, briefly explaining each of them.   **(10 Marks)**

OR

4   a.   Define Controlling. Explain the steps involved in controlling.   **(10 Marks)**
      b.   What is Span of Control? Explain the factors governing it.   **(10 Marks)**

Module-3

5   a.   Differentiate between Micro and Macro economics.   **(04 Marks)**
      b.   Explain briefly with sketch : i) Law of demand   ii) Law of supply.   **(06 Marks)**
      c.   A working woman is planning for her retired life. She has 20 more years of service. She would like to deposit 10% of her salary which is Rs 5000 at the end of the first year and thereafter she wishes to deposit the same amount (Rs 5000) with the annual increase of Rs 1000 for the next 19 years with an interest rate of 18%. Find the total amount at the end of 20 years of service.   **(10 Marks)**

OR

6   a.   Explain the problem solving process in decision making with suitable examples.   **(06 Marks)**
      b.   Explain Elasticity of demand, with an example.   **(04 Marks)**
      c.   Find the effective rate of interest if the nominal annual rate of interest is 8%, when compounded : i) Yearly   ii) Biannually   iii) Quarterly   iv) Monthly   v) Daily. Compare the results.   **(10 Marks)**

Module-4

7   a.   Explain with suitable example : i) Present worth comparison method
        ii) Future worth comparison method   iii) Annual worth equivalent method.   **(10 Marks)**
      b.   Compare the alternative below using present worth analysis at i = 10%.

Particulars	Machine A	Machine B
First cost	Rs 20000	Rs 30000
Annual cost	Rs 9000	Rs 7000
Salvage value	Nil	Nil
Life	3 years	6 years

                                                      (10 Marks)

OR

8 a. Explain IRR, ERR and MARR. Enlist the misconcepts of ERR. **(08 Marks)**

b. A certain individual firm derives and economic analysis to determine which of the two machines is attractive in a given interval of time. The minimum attractive rate of return is 15%. Following data to be used for analysis.

Particulars	Machine X	Machine Y
First cost	Rs 150000	Rs 240000
Estimated life	12 years	12 years
Salvage value	0	6000
Annual maintenance cost	0	Rs 4500

Which machine you would choose? Base your answer on annual equivalent cost. **(12 Marks)**

Module-5

9 a. Explain the following terms : i) Prime cost   ii) Factory cost   iii) Office cost
iv) Total cost   v) Selling price. **(10 Marks)**

b. A manufacturing firm is producing 1000 pens/day. The cost of direct material is Rs 1600/- and that of direct labour is Rs 2000/-. Factory overheads chargeable to it are Rs 2500. If the selling on cost is 40% of factory cost, what must be the selling price of each pen to realize a profit of 20% on each pen sold? **(10 Marks)**

OR

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

b. A Company purchases a lathe machine for Rs 500000 for operating it for 5 years at an interest rate of 5%. If the salvage value is Rs 60000 after 5 years, determine
i) Sinking fund amount   ii) Annual depreciation cost. **(10 Marks)**

* * * * *