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15ME51

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

Time: 3 hrs.

Max. Marks: 80

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

- 1 a. What are the various levels of management? Explain in brief. (08 Marks)
b. Explain the three important roles of manager. (08 Marks)
- 2 a. Discuss the importance of planning and briefly explain the hierarchy of plans. (08 Marks)
b. What is Decision making? What are its objectives? (08 Marks)
- 3 a. What is organizing? What are the various types of organization? (08 Marks)
b. Briefly explain the following:
i) Centralization v/s decentralization
ii) MBO and MBE. (08 Marks)
- 4 a. What is Motivation? Explain MC Gregor's theory X and theory Y of motivation? (08 Marks)
b. What is coordination? Briefly explain the importance and techniques of coordination. (08 Marks)
- 5 a. Explain in brief "Problem solving procedure" in engineering economics. (06 Marks)
b. Explain the following:
i) Price elasticity of demand
ii) Income elasticity of demand. (10 Marks)
- 6 a. Define Interest. Explain effective rate of interest and nominal rate of interest. (08 Marks)
b. A person avails a loan of Rs.10,000/- from a bank at an interest rate of 12% per annum. Find the amount to be repaid in 5 years if the interest is compounded.
i) Annually ii) Semiannually iii) Quarterly iv) Monthly. (08 Marks)
- 7 a. What are the conditions for present worth method of comparison of alternatives? Explain. (06 Marks)
b. An investor can make 3 end of year payments of Rs.15000/- which are expected to generate receipts of Rs.10000/- at the end of year 4, that will increase annually by Rs.2500/- for the following 4 years. Find the present worth of this investment at 10% interest. Use CFD for your analysis. (10 Marks)
- 8 a. What is equivalent annual worth method of comparison of alternatives? What is its advantage? (06 Marks)
b. A parcel of land adjacent to a proposed highway exist is deemed likely to increase in value. It can be purchased now for Rs.80000/- and is expected to be worth Rs.150,000/- (1.5 lakhs) in 5 years. During that period it can be rented for pasture at Rs.1500/year. Annual taxes are presently at Rs.850/year and will likely to remain constant. What rate of return will be earned on this investment? (10 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.

- 9 a. With the help of a chart/block diagram, explain the various elements of cost. (07 Marks)
- b. A small firm is producing 100 pens per day. The direct material cost is found to be Rs.160/-, direct labour cost is Rs.200/- and factory overheads to it are Rs.250/-. If the selling and distribution expenses are 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? (09 Marks)
- 10 a. Define Depreciation. What are the various causes of depreciation? (07 Marks)
- b. Find the depreciation amount during 5th year and book value at the end of 8th year using
- Straight line method
 - Declining balance method
 - Sum of the years digits method, for a machinery with an initial cost of Rs.1,50,000/- and a salvage value of Rs.10,000/- after a service life of 10 years. (09 Marks)
