Question Paper Code : X 20888

B.E./B.Tech. DEGREE EXAMINATIONS, NOV./DEC. 2020

Seventh/Eighth Semester

Mechanical Engineering

MG 6863 – ENGINEERING ECONOMICS

(Common to PTMG 6863 – Engineering Economics for B.E.

(Part – Time) – Seventh Semester – Mechanical Engineering – Regulations 2014)

(Regulations 2013)

Time : Three Hours   Maximum : 100 Marks

Answer ALL questions.

PART – A   **(10×2=20 Marks)**

1. State the meaning of the term break-even point.

2. Identify the scope of engineering economics.

3. List the value engineering procedure.

4. What is meant by time value of money ?

5. Sketch a cash flow diagram with few data.

6. Write the formula to calculate rate of return for an investment.

7. Label the types of maintenance.

8. Compare replacement with maintenance.

9. Name any four causes for depreciation.

10. Mention the objectives of providing for depreciation.

PART – B   (5×13=65 Marks)

11. a) Describe the elements of cost. As an engineer construct a protocol for material selection for a product design.

(OR)

b) Demonstrate law of demand and supply with suitable diagrams and examples.

12. a) Determine value engineering aims and functions. In what way value engineering helps in "make or buy" decision ?

(OR)

b) Analyze uniform gradient series annual equivalent factor with real time examples of your own choice.

13. a) Compare present worth method with future worth method. According to you which method is superior ? Why ? Explain.

(OR)

b) Illustrate the various methods of project evaluation with examples.

14. a) Categorize the types of replacement problem. As an engineer suggest ideas to face the challenges in replacement.

(OR)

b) Summarize the concept of challenger and defender. How will you determine the economic life of an asset.

15. a) How to fix the depreciation amount ? What factors to be considered in determining the amount by depreciation ? Explain any three methods of providing depreciation.

(OR)

b) What is meant by inflation ? State the various procedures to adjust inflation. Illustrate how inflation helps the engineers on comparison of alternative assets.

PART – C   (1×15=15 Marks)

16. a) "In manufacturing, engineering is involved in every detail of a product's production, from the conceptual design to the shipping. Engineering decisions account for the majority of product costs". Justify the statement.

(OR)

b) Discuss in detail about the pillars of Total Productive Maintenance (TPM) and bring out the significance of autonomous maintenance in prevention of machine deterioration.

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