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**Question Paper Code : 50736**

B.E./B.Tech. DEGREE EXAMINATIONS, APRIL/MAY 2024.

Fifth/Sixth Semester

Mechanical Engineering

CME 338 — VALUE ENGINEERING

(Common to : Industrial Engineering / Industrial Engineering and Management /  
Mechanical and Automation Engineering)

(Regulations 2021)

Time : Three hours

Maximum : 100 marks

(Use of statistical tables are permitted)

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Define Value Engineering
2. What is Value Management? Give an example.
3. Define Job Plan.
4. List the benefits of Value Engineering.
5. Define Brainstorming. Give an example.
6. What is the use of ABC Analysis?
7. How will you classify the function?
8. Define Audit. Give an example.
9. What are the applications of value engineering in non-engineering services?
10. What is the need for training plan in value engineering?

PART B — (5 × 13 = 65 marks)

11. (a) State the differences between value analysis and traditional cost reduction techniques and discuss the types of value engineering. (13)

Or

- (b) Describe the uses, applications, advantages and limitations of value analysis. (13)

12. (a) Explain the seven phases of Job Plan with an example. (13)

Or

- (b) Explain the ten principles of value analysis and list the benefits of value Engineering. (13)

13. (a) Describe the concepts of ABC analysis and Morphological Analysis. (13)

Or

- (b) Explain the following :

(i) Function Analysis system Technique. (7)

(ii) Life Cycle Cost (6)

14. (a) State the preparation of work sheets and Give General and information phase about worksheets in detail. (13)

Or

- (b) Discuss the guidelines for writing value engineering proposal and oral presentation, idea listing and comparison method in detail. (13)

15. (a) Discuss steps in executing the value engineering in maintenance and repair activities explain with examples. (13)

Or

- (b) Describe the career development for value engineering specialties. (13)

PART C — (1 × 15 = 15 marks)

16. (a) Explain with neat sketch to develop a FAST Diagram for LCD Projector. (15)

Or

- (b) Assume that you are appointed as a value Analysis and Engineer in an auto related company. Show the guidelines for writing value engineering proposals and also the list cycle cost analysis of any component in your company. (15)