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**Question Paper Code: 49723**

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2018

Elective

Mechanical Engineering

14UME923 - TOTAL QUALITY MANAGEMENT

(Regulation 2014)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

- The purpose of TQM is to provide:
  - Quality product to customers
  - Increase productivity
  - Lower the cost
  - All the above
- The purpose of TQM is to provide:
  - Quality product to customers
  - Increase productivity
  - Lower the cost
  - All the above
- Quality assurance is a function responsible for
  - Controlling quality
  - managing quality
  - Inspections
  - removal of defects
- Statistical methods are used to differentiate random variation from
  - Standards
  - Assignable variation
  - Control limits
  - Specification limits
- Which of the following is not considered a cost of non-conformance to quality?
  - Scrap
  - Rework
  - Expediting
  - Process control

6. The term “benchmarking” means
- (a) Comparing with past data from your organization
  - (b) Comparing with the results of a market survey
  - (c) Comparing with the results of a customer survey
  - (d) none of these
7. Unless evidence indicates otherwise, a process is assured to be
- (a) in control
  - (b) out of control
  - (c) working at full capacity
  - (d) working at less than full capacity
8. Which of the following is least likely to contribute to developing an effective project team supportive of quality?
- (a) Commitment to the project
  - (b) Team member flexibility
  - (c) Frequent turnover of personnel
  - (d) Team interest in workmanship
9. In the matrix management organization, which of the following is true
- (a) The project manager is responsible for employee skills improvement
  - (b) The functional manager is responsible for employee skills improvement
  - (c) The project manager is responsible for the employee’s annual appraisal
  - (d) The employee is responsible for his or her own skills improvement
10. Vision states
- (a) Where the workers want to go after work
  - (b) Whether we should use SPC
  - (c) Whether we should use inspection
  - (d) Where the company wants to be in the long run

PART - B (5 x 2 = 10 Marks)

11. What are the dimensions of quality?
12. Tell the three conditions necessary to create the empowered environment?
13. Name the stages of FMEA.
14. List the phases of quality function deployment.
15. Give the ISO 9000 Series of Standards.

PART - C (5 x 16 = 80 Marks)

16. (a) Discuss the prerequisites for TQM. Also explain the common barriers to the implementation of a TQM programme in an industry. (16)

Or

- (b) Discuss the prerequisites for TQM. Also explain the common barriers to the implementation of a TQM programme in an industry. (16)

17. (a) Explain the seven steps involved in strategic quality planning. (16)

Or

- (b) Discuss the concept of continuous process improvement and the benefits of employee involvement. (16)

18. (a) Explain the seven traditional tools of quality. (16)

Or

- (b) Explain the process of Bench marking. (16)

19. (a) Discuss the concept of quality function deployment and list the major benefits. (16)

Or

- (b) Explain the types of costs that incur in the quality related activities. (16)

20. (a) Discuss the concepts and benefits of ISO 14000. (16)

Or

- (b) Explain the seven quality management principles of ISO 9001:2015 standards. (16)

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