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**Question Paper Code: 49723**

B.E. / B.Tech. DEGREE EXAMINATION, APRIL 2019

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)

1. Quality management requires
  - (a) ISO 9000 certification
  - (b) Workers not working overtime
  - (c) Printing promotional brochures
  - (d) Keeping internal customers satisfied
2. TQM does not imply
  - (a) Strong external customer orientation
  - (b) Partnership with vendors
  - (c) Meticulously re-stocking defective products
  - (d) Training
3. A process is predictable if
  - (a) We can forecast its output
  - (b) It is always at the same level
  - (c) It has no humans involved
  - (d) The data can be plotted on a chart
4. Drawing control charts requires
  - (a) Calculation of statistics from data
  - (b) Adjusting the machines
  - (c) Team work training of workers
  - (d) Top management involvement
5. Six sigma requires
  - (a) Process knowledge
  - (b) An indulging mindset
  - (c) Action on causes of defects
  - (d) All of the above

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. TQM and ISO both focuses on
 

(a) Customer	(b) Employee
(c) Supplier	(d) All the above

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. Define process capability ratio
15. Give the ISO 9000 Series of Standards.

PART - C (5 x 16 = 80 Marks)

- 16 (a) Explain W. Edwards Deming’s 14 Points for total quality management. (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) (i) Briefly explain Employee Involvement. (08)  
(ii) Briefly explain 5s housekeeping Techniques. (08)  
Or  
(b) Explain the seven steps involved in strategic quality planning. (16)
18. (a) Briefly examine seven traditional tools of quality. (16)  
Or  
(b) (i) Illustrate Stages of FEMA. (08)  
(ii) Describe Six sigma concepts. (08)
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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