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Question Paper Code: 49723

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2022

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. Which of the following is responsible for quality objective?
 - (a) Top level management
 - (b) Middle level management
 - (c) Frontline management
 - (d) All the above

2. TQM does not imply
 - (a) Strong external customer orientation
 - (b) Partnership with vendors
 - (c) Meticulously re-stocking defective products
 - (d) Training

3. Quality assurance is a function responsible for
 - (a) Controlling quality
 - (b) managing quality
 - (c) Inspections
 - (d) removal of defects

4. Statistical methods are used to differentiate random variation from
 - (a) Standards
 - (b) Assignable variation
 - (c) Control limits
 - (d) Specification limits

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. A sampling plan helps in
- (a) Keeping the process in control
 - (b) Keeping workers motivated
 - (c) Rejecting lots that are of unacceptable quality
 - (d) Tuning the machines
8. A Pareto chart shows
- (a) That the process is in control
 - (b) The vital few from the trivial many
 - (c) Process capability
 - (d) A line drawn as production proceeds
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. ISO 9002 requires
- (a) Getting production and inspection/installation methods certified
 - (b) Team deliberations for quality
 - (c) Certification for services
 - (d) Constantly holding meetings with customers

PART - B (5 x 2 = 10 Marks)

11. Why TQM is important?
12. List the key elements of supplier partnering
13. State the principles of Pareto analysis
14. Define process capability ratio
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) Write the fourteen principles of Deming's Philosophy for improving quality and productivity. (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) (i) Illustrate Stages of FEMA. (08)

(ii) Describe Six sigma concepts. (08)

19. (a) Explain Quality function Deployment. (16)

Or

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

20. (a) The applicability of TQM has limitations? Do you agree with this statement? Can TQM be implemented in service sectors? Discuss with suitable case studies. (16)

Or

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

