



B.E DEGREE EXAMINATIONS: APRIL/MAY 2016

(Regulation 2009)

Eighth Semester

MECHATRONICS ENGINEERING

GSS103: Total Quality Management

Time: Three Hours

Maximum Marks: 100

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. Which of the following is a fundamental attribute of TQM?
 - a) Drawing control charts
 - b) Meeting ISO 9000 audit
 - c) Top management's direct involvement
 - d) Having team meetings
2. What do you mean by efficiency in an Industry?
 - a) There are no defects in the output
 - b) Resources are made the most
 - c) Process is capable
 - d) Cost of quality is low
3. Which of the following statements is true?
 - a) Customer satisfaction leads to perceived value
 - b) Customer satisfaction leads to customer loyalty
 - c) Customer loyalty leads to perceived value
 - d) Customer loyalty leads to customer satisfaction
4. Which of the following is not true regarding kaizen?
 - a) Kaizen requires substantial investment to fund cutting edge innovation.
 - b) Kaizen is different than reengineering
 - c) Kaizen concentrates on small, gradual improvements over the long term
 - d) Any improvement activity is a part of the kaizen philosophy
5. Which type of chart uses the rule of 20:80?
 - a) Cause and effect chart
 - b) Pareto chart
 - c) Fish bone diagram
 - d) Control chart
6. Low cost, higher volume items requires
 - a) No inspection
 - b) Little inspection
 - c) Intensive inspection
 - d) 100% inspection
7. The sequence of the four phases involved in Bench marking process is

- a) Action, Planning, Integration, Analysis b) Planning, Analysis, Integration, Action
 c) Analysis, Planning, Integration, Action d) Analysis, Action, Planning, Integration
8. Which of the following questions is NOT likely to feature on the checklist of FMEA procedure?
- a) What would the consequences of the failure be? b) What is the likelihood that failure will occur?
 c) What would be the cost of avoiding failure be? d) How likely is such a failure to be detected before it affects the customer?
9. The objective of ISO-9000 family of Quality management is
- a) Customer satisfaction b) Employee satisfaction
 c) Skill enhancement d) Environmental issues
10. Which of the following audit is most comprehensive, which examines the suitability and effectiveness of the system as a whole?
- a) Quantity b) Quality
 c) Preliminary d) Sequential

PART B (10 x 2 = 20 Marks)

11. Assume you want to implement TQM at your organization, mention any two obstacles that you will be considering most.
12. Plan and frame a Quality Statement for your present organization.
13. List the activities performed by your organization to satisfy their customers.
14. List your suggestions to implement 5S at your organization with immediate effect.
15. Examine the validity of Normal Curve for your class performance and justify.
16. Define process capability.
17. Differentiate between process benchmarking and product benchmarking.
18. Define Total Productive Maintenance.
19. Why ISO for environment is important to an Organisation?
20. Assume you are given a chance to audit your class, what are all the parameters need to be considered for an effective Quality Audit?

PART C (5 x 14 = 70 Marks)

21. a) Discuss in detail about Deming's contribution to TQM.
- (OR)**
- b) Assume that you are asked to form a Quality Council for a small scale Industry. Provide your guidance and suggestions to form an effective Quality Council for that organization.

22. a) Choose a small scale Industry known to you and plan a model to collect and evaluate their customer satisfaction level.

(OR)

- b) Construct a performance appraisal system for your classmates and judge your performance when compared to others.

23. a) List out seven basic tools of quality. Explain any three of them with suitable example.

(OR)

- b) Plan a method to implement Six Sigma at your organization and explain any three major difficulties you will be facing to effectively implement Six Sigma at your organization.

24. a) Examine the possibility of applying QFD for a small scale industry known to you. List 10 suggestions to reduce the gap between customer expectation and Industry output.

(OR)

- b) Apply FMEA for a ceiling fan and calculate RPN for any four failure modes.

25. a) What are the elements of an ISO 9000 system? Explain any four sub elements in detail.

(OR)

- b) Explain the basis requirements for obtaining ISO 14000 certification for an organization.
