



B.E DEGREE EXAMINATIONS: APRIL/MAY 2016

(Regulation 2013)

Sixth Semester

MECHATRONICS ENGINEERING

U13GST002: Total Quality Management

Time: Three Hours

Maximum Marks: 100

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. Where was Total Quality Management first developed?
 - a) USA
 - b) UK
 - c) Japan
 - d) Korea
2. Quality means freedom from deficiencies says _____.
3. 'Improving quality through small incremental improvements' is a characteristic of what type of quality management system?
 - a) Just-in-time
 - b) Kaizen
 - c) Six sigma
 - d) FMEA
4. A small voluntary group of people performing quality improvement activity is named as _____.
5. The process mapping is a _____ diagram.
 - a) Data flow
 - b) Work flow
 - c) Circular
 - d) Audit
6. _____ is an approach developed by Motorola to improve its processes by minimizing defects.
7. Quality Function Deployment is a method for _____.
 - a) Controlling quality in production
 - b) Controlling quality in restaurants
 - c) Translating customer needs to product specification
 - d) Finding out what customer wants
8. A group creativity technique designed to generate a large number of ideas for the solution of a problem is termed as _____.
9. Which of the following is for Environment management?
 - a) ISO-9000
 - b) ISO-14000
 - c) ISO-26000
 - d) ISO-31000
10. _____ is a series of standards dealing with quality management systems.

PART B (10 x 2 = 20 Marks)
(Answer not more than 40 words)

11. How is 'Quality' mathematically quantified?
12. List out various dimensions of quality.
13. Define the term internal customer.
14. What is Kaizen?
15. Indicate the meaning of process capability.
16. Define sample and population.
17. List any four major losses that can be considered in Total Productive Maintenance.
18. What is meant by RPN in FMEA? State the impact of RPN on the process.
19. Draw the documentation pyramid of the quality management systems.
20. Name the three basic levels of QS9000 standard

PART C (5 x 14 = 70 Marks)
(Answer not more than 400 words)

Q.No. 21 is Compulsory

21. Explain about Deming's fourteen points for quality management.

22. (a) (i) Discuss in detail the customer perception of quality. (10)
(ii) Enumerate any seven characteristics of successful teams. (4)

(OR)

(b) (i) What is meant by JIT? Explain the concept of continuous process improvement in JIT manufacturing. (10)
(ii) Explain principles of 5S with neat diagram. (4)

23. (a) Explain briefly the New seven management tools.

(OR)

(b) Explain the concept of statistical process control and the construction of control charts for the attributes with an example.

24. (a) (i) Explain the steps involved in implementation of TPM. (10)
(ii) Summarize about Taguchi quality loss function. (4)

(OR)

(b) (i) What is meant by house of quality? Explain in detail for major steps involved for constructing house of quality. (10)
(ii) List out the advantages of benchmarking in an organization. (4)

25. (a) (i) Explain the various requirements of ISO 14001. (10)
(ii) What are the benefits of quality auditing? (4)

(OR)

(b) (i) Describe about ISO 9000 standard. (10)
(ii) Brief about the preparation of documentation. (4)
