

Register No:

B.E., DEGREE EXAMINATIONS: NOV/DEC 2012

Seventh Semester

MECHANICAL ENGINEERING

GSS103: Total Quality Management

Time: Three Hours

Maximum Marks: 100

Answer All the Questions

PART A (10 x 1 = 10 Marks)

1. Costs associated with measuring, evaluating and auditing purchased components /material to make sure that they conform to set standards.
 - a. Prevention cost
 - b. Appraisal cost
 - c. Internal failure cost
 - d. External failure cost
2. The probability of a product to perform adequately for the period intended under the given operating conditions.
 - a. Durability
 - b. Reliability
 - c. Maintainability
 - d. Availability
3. Quality planning, quality control and quality improvement-the three Universal sequences that could be applied to any industry-was advocated by
 - a. Crosby
 - b. Juran
 - c. F.W.Taylor
 - d. Henri Fayol
4. The statement that goes as per Herzberg motivational theory.
 - a. Hygiene factors do not motivate and are necessary only to avoid dissatisfaction.
 - b. Hygiene factors motivate and are necessary to avoid dissatisfaction
 - c. Hygiene factors motivate mainly those at the managerial level
 - d. Hygiene factors do not motivate and are not needed for anyone.
5. The quality tool used to examine the relation between two variables to find whether they are related.
 - a. Network diagram
 - b. Matrix diagram
 - c. Scatter diagram
 - d. Tree diagram
- 6.. Cause and effect diagram is also called as
 - a. Johnson's diagram
 - b. Hungarian diagram
 - c. Ishikawa diagram
 - d. Cost-benefit diagram

7. Outstanding process performance within an industry.
- a. Core-competencies
 - b. Critical success factor
 - c. Benchmark
 - d. Best-in-class
8. In FMEA, RPN stands for.
- a. Repeated performance number
 - b. Repeated project number
 - c. Risk proportion number
 - d. Risk priority number
9. The single international automotive management system
- a. ISO/TS 16949
 - b. QS 9000
 - c. ISO 9000:2008
 - d. ISO 14000
10. MR under ISO stands for.
- a. Maintenance register
 - b. Management representative
 - c. Minimum resources
 - d. Maximum resources

PART B (10 × 2 = 20 Marks)

- 11. List the various quality costs?
- 12. What is strategic planning?
- 13. What is the use of performance appraisal?
- 14. Define the term Kaizen.
- 15. Which control chart uses “defectives”.
- 16. Define the term stratified sampling.
- 17. Define the term “Voice of customer”.
- 18. State the objective of TPM?
- 19. List the documents under ISO?
- 20. For whom the standard QS9000 was developed?

PART C (5 × 14 = 70 Marks)

21. a) State the principles of Deming and how can these principles be used in the machinery maintenance division of a medium scale fabrication shop.

(OR)

- b) List the barriers to TQM implementation with ways to eliminate them.

22. a) What is 5S? How are the concepts of 5S used in fire engines?

(OR)

b) Explain the term “customer satisfaction” and discuss on the link between customer complaints and customer retention.

23. a) Draw a cause and effect diagram making suitable assumptions for the effect “late coming of staff of an office”.

(OR)

b) (i) Draw a process decision program chart (PDPC) for the objective “plan for a training program”. (7)

(ii) Explain the “R-DMAIC-SI” steps of six sigma implementation. (7)

24. a) Explain the process of benchmarking.

(OR)

b) Explain the relevance of RPN calculation under FMEA taking a household product as an example.

25. a) State the elements and sub elements under ISO 9000:2008.

(OR)

b) Discuss the procedure and techniques of ISO quality auditing.
