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Question Paper Code : 31058

B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2013.

Eighth Semester

Mechanical Engineering

080120066/080230074/080290055 B — TOTAL QUALITY MANAGEMENT

(Common to Computer Science and Engineering and Environmental Engineering)

(Regulation 2008)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. List any four dimensions of Quality.
2. Mention the barriers involved in TQM implementation.
3. Differentiate between Empowerment and Delegation.
4. List the key elements of supplier partnering.
5. State the principle of 'Pareto Analysis'.
6. What are the stages of six sigma?
7. What is a 'Quality circle'?
8. How will you calculate 'OEE'?
9. Specify the objective of 'Quality policy'.
10. What are the objectives of 'ISO 9000' standards?

PART B — (5 × 16 = 80 marks)

11. (a) (i) Write the fourteen steps of Deming's philosophy for improving quality, productivity and competitiveness.
(ii) What are Quality statements? Explain with examples.
- Or
- (b) (i) Explain in detail the Juran's quality planning road map.
(ii) Review the history of TQM chronologically.
12. (a) (i) Discuss the roles to be played by the employees for an effective implementation of KEIZEN.
(ii) Explain the key elements of customer supplier partnership.
- Or
- (b) (i) Briefly explain the continuous process improvement.
(ii) Explain the roles of a Team leader and a Facilitator.
13. (a) (i) Explain any two tools of seven statistical tools with an example.
(ii) Discuss the role of six sigma in service sectors.
- Or
- (b) (i) What are the reasons for Bench marking? Explain six important steps in the process of bench marking.
(ii) Define FMEA. Discuss on two types of FMEA.
14. (a) (i) What are the objectives of TPM? Explain the five pillars of TPM.
(ii) Brief six basic techniques for presenting performance measure.
- Or
- (b) (i) What are the objectives of QFD? Discuss on four phases of QFD process.
(ii) Explain 'Taguchi loss function' and the evaluation method of the loss developed by him.
15. (a) (i) Explain Quality Audit in detail.
(ii) Discuss the main elements of ISO 14000
- Or
- (b) (i) What are the barriers for implementing TQM in an industry? Explain.
(ii) Specify the differences between ISO 9000 and QS 9000.