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**Question Paper Code : 21637**

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2015.

Sixth/Seventh/Eighth Semester

Civil Engineering

GE 2022/GE 607/GE 71/IE 72/10177 GE 004/10144 GE 004/10177 GE 701/  
10144 CSE 44 — TOTAL QUALITY MANAGEMENT

(Common to All Branches)

(Regulations 2008/2010)

(Also common to PTGE 2022/10177 GE 004/10144 GE 004/10144 CSE 44 —  
Total Quality Management for B.E. (Part-Time) Fifth/Sixth/Seventh Semester  
Civil Engineering, ECE, CSE, EEE and Mechanical Engineering —  
Regulations 2009/2010)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. How is quality defined? Give any two definitions.
2. Compare quality requirements before and after TQM.
3. What are the traits of successful leaders?
4. What is 'strategic quality planning'?
5. How is a scatter diagram used?
6. What are the reasons for benchmarking?
7. What sparked the interest of Indian manufacturers in quality circles?
8. What is the importance of Taguchi's quality loss function?
9. What are the items covered by ISO 9000 regarding quality?
10. Write short notes on 'ISO certification'.

PART B — (5 × 16 = 80 marks)

11. (a) (i) What are the basic concepts of TQM? Discuss in detail. (8)  
(ii) What is TQM framework? Discuss with a case study. (8)

Or

- (b) (i) Discuss the contribution of Juran for quality in detail. (8)  
(ii) What are the barriers for TQM implementation? (8)

12. (a) What are the various avenues of measuring customer satisfaction? Give examples.

Or

- (b) (i) How is PDSA cycle practiced? Give an example. (8)  
(ii) What is meant by vendor development? Give an example. (8)

13. (a) How are the following tools used to improve quality?

- (i) Tree diagram. (8)  
(ii) Matrix diagram. (8)

Or

- (b) (i) Discuss the benchmarking process with an example. (8)  
(ii) What are the types of FMEA? Give an example of each. (8)

14. (a) The handle of a domestic iron box is being designed. How is QFD applied for their process? Discuss with the diagram of House of quality.

Or

- (b) What are the pillars of TPM? Discuss them in detail. How are they implemented?

15. (a) Discuss in detail the following pertaining to ISO 9000 :

- (i) Documentation. (6)  
(ii) Quality auditing. (10)

Or

- (b) (i) What are the origins of QS-9000? Why was it developed despite of the presence of ISO 9000? (8)  
(ii) What is an environmental management system? Discuss the provisions of ISO 14000 in detail. (8)