

29/4/17 (F2)

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Question Paper Code : 71949

B.E./B.Tech. DEGREE EXAMINATION, APRIL/MAY 2017.

Sixth/Seventh/Eighth Semester

Mechanical Engineering

GE 6757 – TOTAL QUALITY MANAGEMENT

(Common to Aeronautical Engineering, Automobile Engineering, Biomedical Engineering, Civil Engineering, Computer Science and Engineering, Electrical and Electronics Engineering, Electronics and Communication Engineering, Electronics and Instrumentation Engineering, Environmental Engineering, Industrial Engineering, Industrial Engineering and Management, Instrumentation and Control Engineering, Manufacturing Engineering, Materials Science and Engineering, Mechanical Engineering, Mechanical and Automation Engineering, Mechatronics Engineering, Medical Electronics Engineering, Petrochemical Engineering, Production Engineering, Chemical Engineering, Fashion Technology, Food Technology, Information Technology, Petrochemical Technology, Petroleum Engineering, Pharmaceutical Technology, Plastic Technology, Polymer Technology)

(Regulations 2013)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What are the four absolutes of quality defined by Crosby?
2. Define quality policy statements?
3. What is Kaizen philosophy?
4. Why team and team work are required in TQM?
5. Mention the use of Stratification chart in TQM.
6. State the primary objectives of six sigma.
7. Write the key concepts of six sigma.
8. List out the benefits of total productive maintenance.

9. What are the important requirements of QS9000?
10. Mention the different types of quality audits.

PART B — (5 × 16 = 80 marks)

11. (a) Elaborate the fourteen steps involved in Crosby's total quality approach.

Or

- (b) (i) Describe the various dimensions of quality with respect to the following: quality in products and quality in services. (8)
- (ii) Explain the common customer feedback collection tools. (8)
12. (a) (i) Enumerate the duties of quality council. (8)
- (ii) Explain McGregor's theory X and theory Y. (8)

Or

- (b) What do you understand by the term quality statements? Elaborate them with examples.
13. (a) Why bench marking is required in an organization? Illustrate the different types of bench marking process. Write down the general procedure for bench marking process.

Or

- (b) List out the different situations where FMEA is to be carried out. Give detailed FMEA procedure.
14. (a) Write down the objectives of implementing total productive maintenance. Discuss about the core elements of TPM program. Compare TQM and TPM.

Or

- (b) (i) List out the benefits of performance measures. (6)
- (ii) Briefly explain the DMAIC procedure (10)
15. (a) Enumerate the various aspects of ISO 14000 environmental management system. Brief the various principles of ISO 14000 series.

Or

- (b) Illustrate the detailed procedure for quality auditing. Brief the attributes of a good auditor.