

- (b) Enumerate the benefits of Total Quality Management. 3
- (c) What do you mean by lean manufacturing? 3
- (d) State training and mentoring effectively. 3
- (e) How does employee education and training contribute towards strengthening quality? 3
- (f) Define internal benchmarking. 2
- (g) What do you mean by quality audit? 3

SECTION - A

- 2. (a) Describe briefly key elements of Total Quality Management. 10
- (b) How do organizations use employee empowerment for improving quality at workplace? 10

22609- (P-4)(Q-9)(23) (2)

- 3. What do you mean by cost of quality? Explain Juran's model of optimum quality costs. Discuss the analysis of cost of quality for improvement. 20

SECTION - B

- 4. (a) Elaborate the concept of Kaizen and the steps required to implement it in an industry. 10
- (b) Describe the *seven* basic QC tools. 10
- 5. What do you mean by ETX model? Explain the various steps. Also, explain the Kanban system and its uses. 20

SECTION - C

- 6. (a) What is bench marking? Differentiate between internal and external benchmarking. 10
- (b) What is Taguchi' design of experiments? Discuss its applications and benefits. 10

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7. What do you mean by FMEA ? What are the various types ? Explain *seven* steps of FMEA. 20

SECTION – D

8. What is ISO ? Describe the twenty elements of ISO 9000 standards. 20
9. Write short notes on the following : 2 × 10 = 20
- (a) Vendor rating system
- (b) Quality and Product Audit

Roll No.

22609

**M. Tech. 2nd Semester (ME) CBCS
Scheme Examination – June, 2023**

TOTAL QUALITY MANAGEMENT

Paper : MTME22C2

Time : Three Hours]

[Maximum Marks : 100

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt five questions in all. Questions No. 1 is compulsory. Attempt four more question from the Sections A, B, C & D by selecting at least one question from each Section.

1. (a) What do you understand by Total Quality Management ? How is quality interrelated with cost ? 3