

Roll No. ....

22615

M. Tech. 1st Semester (MAE)  
CBCS Scheme  
Examination – February, 2022

TOTAL QUALITY MANAGEMENT

Paper : MTMA21C3

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, selecting *one* question from each Unit. Question No. 1 is *compulsory*. All questions carry equal marks.

1. Explain the following : 4 × 5 = 20
- (a) Sub-elements of Internal failure cost category
  - (b) Taguchi Quality loss function
  - (c) The Malcolm Baldrige National Quality Award
  - (d) Seven deadly waste

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UNIT – I

- 2. (a) Explain the characteristics of quality circles. 6
- (b) Discuss the concept of TQM and its significance in business performance. 6
- (c) Discuss the pitfalls of bench marking. 8
- 3. (a) What is the use of quality cost information in improving the business performance of the organization ? 6
- (b) Describe Deming's philosophy for TQM. 6
- (c) Discuss implementation of TQM with a case study from automobile industry. 8

UNIT – II

- 4. (a) Explain how one should organize for TQM through the systems approach ? 10
- (b) Discuss the factors involved in Kaizen for continuous improvement. 10
- 5. (a) Discuss Attribute Code in Parts Classification and Coding. 10
- (b) Discuss Juran's trilogy with suitable graph. 10

UNIT – III

- 6. (a) What is standard normal distribution ? Discuss its need and application in TQM. 10
- (b) What are the major losses prevented by adopting TPM ? 10

7. (a) Discuss in detail how the voice of customer in transformed into technical and functional requirements by QFD. 10
- (b) What is FMEA ? Discuss it with a suitable example on worksheet. 10

#### UNIT – IV

8. (a) Explain the working principle of third party audit. 10
- (b) Enumerate the various aspects of ISO-14000 environmental management system. Brief the various principles of ISO-14000 series. 10
9. (a) Explain PDCA cycle for problem solving. 10
- (b) What are the origins of QS 9000 ? Why was it developed despite of presence of ISO-9000 ? 10

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