



**B.E DEGREE EXAMINATIONS: APRIL 2018**

(Regulation 2014)

Eighth Semester

**U14GST002: Total Quality Management**

(Common to EEE / EIE)

**COURSE OUTCOMES**

**CO1:** Understand quality concepts and philosophies of TQM

**CO2:** Apply TQM principles and concepts of continuous improvement

**CO3:** Apply and analyze the quality tools, management tools and statistical fundamentals to improve quality

**CO4:** Understand the TQM tools as a means to improve quality

**CO5:** Remember and understand the quality systems and procedures adopted

**Time: Three Hours**

**Maximum Marks: 100**

**Answer all the Questions:-**

**PART A (10 x 1 = 10 Marks)**

1. Match the following based on the function of built in test equipment.

CO3 [K<sub>2</sub>]

List I	List II
A. Pareto analysis is	i. Lower control limit
B. X bar means	ii. Data analysis
C. LCT means	iii. Average of reading
D. ISO	iv. International organization for standard

	A	B	C	D
a)	ii	iii	i	iv
b)	iv	iii	ii	i
c)	iii	ii	i	iv
d)	iii	iv	ii	i

2. A fundamental attribute of TQM is

CO2 [K<sub>1</sub>]

- |                                        |                           |
|----------------------------------------|---------------------------|
| a) Drawing control charts              | b) Having team meetings   |
| c) Top management's direct involvement | d) Meeting ISO 9000 audit |



10. For what duration is the ISO certification valid for any organization? CO5 [K<sub>2</sub>]
- a) 5years b) 4 years
- c) 3 years d) 2 years

**PART B (10 x 2 = 20 Marks)**

**(Answer not more than 40 words)**

11. Define Quality with its equation. CO1 [K<sub>1</sub>]
12. List the various steps important for quality planning. CO1 [K<sub>1</sub>]
13. What do you understand by Continuous Process improvement? CO2 [K<sub>2</sub>]
14. “Customer Retention moves customer satisfaction to the next level”- Justify with reasons. CO2 [K<sub>2</sub>]
15. Define Control Chart. CO3 [K<sub>1</sub>]
16. Write a brief note on “Statistical Process Control”. CO3 [K<sub>1</sub>]
17. Define Benchmarking. CO4 [K<sub>1</sub>]
18. List out the various types of Failure Mode and Effect Analysis and its benefits. CO4 [K<sub>1</sub>]
19. Give the objectives of the internal audit. CO5 [K<sub>2</sub>]
20. Why is ISO 9000 important? CO5 [K<sub>2</sub>]

**Answer any FIVE Questions: -**

**PART C (5 x 14 = 70 Marks)**

**(Answer not more than 300 words)**

**Q.No. 21 is Compulsory**

21. Explain Deming principles and Juran’s trilogy in detail for quality achievement. CO1 [K<sub>1</sub>]
22. (i) What are the dimensions of quality? Discuss eight of them. (10) CO1 [K<sub>1</sub>]
- (ii) What are the duties of quality council? (4) CO1 [K<sub>1</sub>]
23. Describe how to implement Japanese 5S concept, Kaizen policy and supplier partnership. CO2 [K<sub>2</sub>]
24. (i) Explain the problem solving method using Six Sigma Concept. (7) CO3 [K<sub>2</sub>]
- (ii) What are the seven management tools of quality in statistical process control? (7) CO3 [K<sub>2</sub>]

25. Explain about the following:
- (i). QFD process (7) CO4 [K<sub>2</sub>]
  - (ii). Benchmarking process (7) CO4 [K<sub>2</sub>]
26. Discuss the need, construction of various control charts for variables. CO3 [K<sub>2</sub>]
27. (i) Explain about various processes used in ISO 9001 quality management system. (7) CO5 [K<sub>1</sub>]
- (ii) What are the benefits of ISO 14000? Justify how is it applicable for a chemical industry? (7) CO5 [K<sub>2</sub>]

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