

Reg. No. :

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**V 4193**

B.E./B.Tech. DEGREE EXAMINATION, APRIL/MAY 2008.

Eighth Semester

(Regulation 2004)

Chemical Engineering

MG 1401 — TOTAL QUALITY MANAGEMENT

(Common to Biotechnology, Polymer Technology, Textile Technology  
(Fashion Technology), Textile Technology, Textile Technology  
(Textile Chemistry))

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Briefly explain about appraisal cost.
2. Mention any two Indian companies who have won Deming award.
3. What is cross functional team?
4. What are the objectives of performance measure?
5. What are the control limits for  $\bar{X}$  and R-CHARTS?
6. How will you calculate process capability ratio?
7. Define Bench marking.
8. What are the objectives of TPM?
9. What are the objectives of ISO 9000 – 2000 certification?
10. What are the main elements of ISO 14000?

PART B — (5 × 16 = 80 marks)

11. (a) (i) Explain the steps in quality planning. (8)  
(ii) Discuss the evolution of TQM. (8)

Or

- (b) (i) Define leadership and discuss the role of senior management in implementing TQM. (10)  
(ii) List the 14 principles of Deming's Quality Management. (6)
12. (a) (i) Explain how the organization can make use of customer complaints for their development process. (8)  
(ii) How does recognition and reward will enhance employee motivation? (8)

Or

- (b) (i) How does an organization can practice 5S? Explain in detail the 5S and its benefits. (4 + 8 = 12)  
(ii) Distinguish between KAIZEN and KAIRYO. (4)
- 1 (a) (i) Explain the properties of Normal distribution curve. (8)  
(ii) Explain Pareto's 80/20 rule with an illustration. (8)

Or

- (b) (i) Explain the concept of six – sigma. (8)  
(ii) What is affinity diagram? (2)  
(iii) Explain how affinity diagram can be constructed. (6)
14. (a) (i) Explain Taguchi's quality loss function. (8)  
(ii) Explain the benchmarking process. (8)

Or

- (b) (i) Explain the eight pillars of TPM. (8)  
(ii) What are the objectives of QFD? (4)  
(iii) What is an occurrence in FMEA? (4)

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15. (a) Write short notes on :

- (i) Policy
- (ii) Procedure
- (iii) Work instructions and
- (iv) Records.

(4 × 4 = 16)

Or

- (b) (i) What are the objectives and stages of Audit? (8)
- (ii) What are the different steps to be followed in conducting an audit? (8)