Reg. No. : | | | | | | | | | | | | |

Question Paper Code : 50659

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2017
Sixth/Seventh/Eighth Semester
Mechanical Engineering
GE 6757 – TOTAL QUALITY MANAGEMENT
(Regulations 2013)
(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 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)

Time : Three Hours | Maximum : 100 Marks

Answer ALL questions.

PART – A (10×2=20 Marks)

1. What is quality statement ?
2. What are the dimensions of quality ?
3. What are the continuous process improvement ?
4. What is quality circle ?
5. What do you mean by six sigma ?
6. List the stages of FMEA.
7. What are the objectives of QFD ?
8. Classify the control charts.
9. What is need for ISO ?
10. What is quality audit ?

PART – B (5×16=80 Marks)

11. a) i) Why to measure quality costs ? Classify the various types of quality costs and give examples.

ii) What are the customer perceptions of quality ? Explain.

(OR)

b) Explain Deming's fourteen principles for Quality Management. How do you feel that these will be useful in today's context in service industry.

12. a) Elaborate the Japanese 5s as applicable to services.

(OR)

b) Discuss the role and contributions of quality council.

13. a) Describe the traditional seven QC tools and their merits and demerits.

(OR)

b) Explain in detail the concept of FMEA.

14. a) Discuss the

i) Concepts of TPM and (10)

ii) Differentiate with TQM. (6)

(OR)

b) i) The Taguchi loss function for a certain component is given by L(X) = 7500 (X-N)2, where X = the actual value of a critical dimension and N is its Nominal value. Company Management has decided that the maximum loss that can be accepted is Rs. 400. If the nominal dimension is 35.00 mm. Find the tolerance limits. (10)

ii) Explain the concept of signal to Noise ratio. (6)

15. a) Explain how each element of TQM contributes to products and services of superior quality.

(OR)

b) Describe the implementation of ISO 14000 requirements and benefits.