Roll No .....

MMCM-202.

M.E./M.Tech. II Semester

Examination, June 2016

Total Quality Management

Time : Three Hours

Maximum Marks: 70

Note : Attempt any five questions. All questions carry equal marks.

1. a) Define TQM. What are the key activities in a TQM system? 7

   b) Define customer. What are the types of customers? 7

2. a) How total employee involvement can be achieved? 7

   b) What are the advantages and disadvantages of total employee involvement? 7

3. a) What are crosby's basic elements of improvements? 7

   b) Discuss briefly deming 14-point programme? 7

4. a) Explain just-in-time philosophy? 7

   b) Discuss the concept of 5S? 7

5. A sample size of 5 is used in preparing a C-chart for the number of non conformities. Twenty measurements for the number of non conformities per 5 units are given.

7, 3, 9, 3, 5, 7, 4, 8, 6, 0, 6, 1, 4, 6, 7, 6, 8, 2, 3, 6.

Plot the C chart showing the control limits. Draw your conclusions. 14

6. The upper specification limit for sulfur content in an alloy is 0.8%. The manufacturer wants to accept 2% nonconformities with a probability of 5% and 12% non conformities with a probability of 8%. The lots received are known to have a standard deviation of 0.15%. Develop a sampling plan. If a sample taken according to the plan has a mean value of 0.7% sulfur content, is the lot acceptable? 14

7. a) Discuss the fundamental concepts of six sigma? 7

   b) What is ISO? What is ISO 9000 quality system? 7

8. a) Discuss the basic concept of QFD (Quality Function Deployment? 7

   b) A newly developed automobiles is undergoing a test on the proving ground. The testing accumulated 4,240 hours and 16 failures occurred during this period. Calculate the MTBF value. 7

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