

**B.Tech. – VIEP – MECHANICAL ENGINEERING
(BTMEVI)**

Term-End Examination

December, 2016

BIMEE-019 : TOTAL QUALITY MANAGEMENT (TQM)

Time : 3 hours

Maximum Marks : 70

Note : Attempt any five questions. All questions carry equal marks. Use of scientific calculator is permitted.

1. What is Quality Control ? What are the objectives of quality control ? Describe the role of inspection in quality control in any manufacturing industry.

14

2. Data for the test results of 17 samples of 300 items are shown below. Find out the upper control limit and lower control limit for P-chart and draw this chart.

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<i>Sample Number</i>	<i>Number of Defectives</i>
1	30
2	36
3	33
4	27
5	33
6	39
7	24
8	24
9	12
10	39
11	18
12	27
13	24
14	33
15	21
16	30
17	6

3. (a) What are the salient features of Taguchi approach ? Explain in detail.
- (b) What is Quality Loss Function ? Explain the concept of quality loss function with suitable example. 7+7

4. (a) What is reliability ? What are the various factors influencing reliability ? Discuss.
- (b) Consider a combined system as shown in Figure 1. The reliability of each element is given in Figure 1. Find the overall reliability of the total system. 7+7

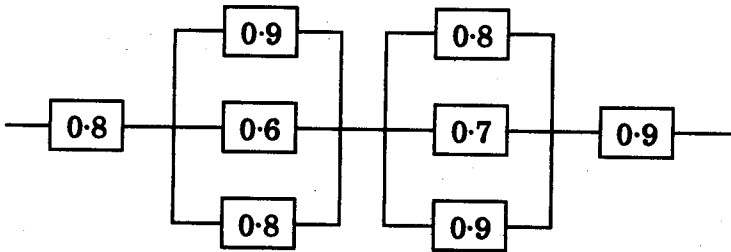


Figure 1

5. (a) What is Quality Function Deployment (QFD) ? What are the steps involved in implementation of QFD ? List out the benefits of QFD.
- (b) Define zero defect. Describe the procedure of implementation of zero defect programme. 7+7

6. (a) What is ISO 9000 quality management system ? List out the benefits of the quality management system.

(b) What is Just In Time (JIT) ? How is JIT helpful in improving the quality of manufacturing ? Explain.

7+7

7. Write short notes on any *two* of the following :

2×7=14

(a) Modern Concept of TQM

(b) Quality Circles

(c) Economics of Quality
