

Time: 3 hour

Max. Marks: 80

Note-

1. Question one is compulsory.
2. Solve any three out of remaining five.

- Q.1 Explain any four of the following. 20
- i. Definition of TQM and TQM Concept
 - ii. Seven QC Tools and short explanation
 - iii. Give the Principles of TQM?
 - iv. Supplier Selection
 - v. Explain Bench Marking
 - vi. Explain Win -Win policy with supplier.

Draw the C -chart and analyse the chart & comment it 10

Sample No.	No.of Defects	Sample No.	No.of Defects	Sample No.	No.of Defects
1	5	8	6	15	6
2	4	9	8	16	5
3	5	10	7	17	4
4	6	11	6	18	6
5	4	12	5	19	6
6	4	13	4	20	6
7	5	14	7		

Q.2 a

- b Explain voice of customer and QFD. What are the elements and matrix relationship for QFD .

- Q.3 a Describe the contribution of Juran and Crosby to quality management. 10
- b Explain the following elements of an ISO 9000 quality system. 10
- a) quality manual b) internal audit iii) Traceability

- Q.4 a Explain the 'Barriers of TQM' and Write note on cost of quality 10
- b Describe the contribution of Deming to quality management. 10

- Q.5 a What is six sigma? Explain six sigma approach DMAIC . 10
- b What is acceptance sampling plan? With OC curve mark and explain following i) Acceptance quality level(AQL) ii) Lot tolerance percent defective(LTPD) iii) Producer's risk iv) Consumer's risk 10

- Q6 Answer any Two Questions
- a What is the criteria for performance excellence of Malcolm Baldrige national Quality Award? 10
- b Explain the following charts 10
- (i) X-Bar chart, R-Chart (ii) p-chart and np-chart
- c Write short note on the following 10
- 1) TPM 2) Employee Involvement
