



Name :

Roll No. :

Invigilator's Signature :

CS/MBA (OLD)/SEM-(3 FT & 5 PT)/MB-301/2010-11

2010-11

QUALITY MANAGEMENT

Time Allotted : 3 Hours

Full Marks : 70

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

GROUP – A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for the following :

$$10 \infty 1 = 10$$

i) After inspection of 10 rods, each of length 5 metres, the following number of defects is found on each rod :

45, 42, 52, 46, 51, 46, 50, 43, 51, 49.

The control chart suitable will be

- a) R-chart
- b) *p*-chart
- c) *c*-chart
- d) a combination of *R*-chart and *p*-chart.



- ii) Who amongst the following introduced the concept of Total Quality Management (TQM) ?
- a) Dr. Edwards Deming
 - b) Dr. Joseph Juran
 - c) Dr. Ishikawa
 - d) Dr. Taguchi.
- iii) What is the purpose of ISO-9000 in a manufacturing organization ?
- a) Implement quality management systems
 - b) Implement quality control systems
 - c) Operate quality control department
 - d) Operate quality audit department.
- iv) What is quality circle ?
- a) A task force
 - b) Problem solving tool of management
 - c) Voluntary organization formed by the labour unions
 - d) Voluntary team of experts formed by the management.



- v) Kaizen means
- a) Continuous Improvement
 - b) Once improved forget it
 - c) Availability in time
 - d) Delay in work.
- vi) What is Fault Tree Analysis ?
- a) Analytical method for implementation of TQM
 - b) Analytical method for implementation of Kaizen
 - c) Analytical method for implementation of ISO-9000
 - d) Statistical method for implementation of TQM.
- vii) What should be the optimum level of quality conformance in a TATA NANO motor car production unit ?
- a) Zero defect
 - b) Moderate failure cost
 - c) Failure cost less than appraisal cost
 - d) Failure cost equal to appraisal cost.



viii) Which of the following are the four dimensions of service quality ?

- a) Man — Material — Machine — Money
- b) People — Performance — Procedure — Package
- c) Reliability — Assurance — Empathy — Tangibles
- d) Customer — Company — Control — Cost.

ix) What is the function of Pareto chart in Quality Management Systems ?

- a) Tool for quality control
- b) Tool for benchmarking
- c) Tool for quality planning
- d) Tool for identifying significant defects.

x) Who amongst the following introduced the term Benchmarking ?

- a) Deming
- b) Camp
- c) Juran
- d) None of them.



GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following. $3 \times 5 = 15$

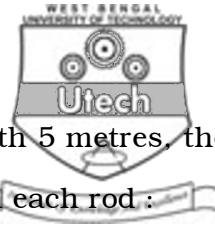
2. “TQM is a philosophy that involves everyone in an organization in a continual effort to improve quality and achieve customer satisfaction.” Enumerate.
3. Briefly discuss the different elements of cost of quality.
4. State briefly the criteria for selection for the Malcolm Baldrige National Quality Award for the American Industry.
5. Give your opinion for the possible determinants of service quality ?
6. Explain the concept of RPN as used in failure Mode Effect Analysis.

GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following. $3 \times 5 = 15$

7. a) “Much of the progress that organizations made in quality management is attributed to the teachings of Quality *Gurus* such as Deming, Juran, Crosby, Taguchi and Ishikawa.” Discuss the contribution of Juran or Deming in the field of quality management. 9
- b) State briefly Taguchi’s Loss function. 6



8. a) After inspection of 10 rods, each of length 5 metres, the following number of defects are found on each rod :

45, 42, 52, 46, 51, 46, 50, 43, 51, 49

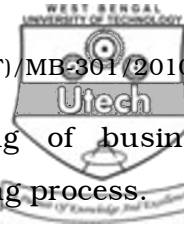
Construct a suitable control chart and comment whether the process is under control. 7

- b) What do you understand by the term “Acceptance Sampling” ? Explain the terms AQL and LTPD. What is the difference between Producer’s Risk & Consumer’s Risk ? 8

9. a) You are the Technical Officer of a manufacturing organization. The organization is facing the problem of poor quality of its finished goods. You are required to analyse the causes using a fish bone diagram. 9

- b) Draw the Pareto diagram for the following data : 6

Cause	No. of Defects
Poor design	80
Defective material	3
Surface abrasions	3
Wrong part dimensions	16
Incorrect machine calibration	7
Operator errors	4
Defective parts	12



10. a) What is the need for re-engineering of business processes ? Enumerate the re-engineering process. 9
- b) Discuss the advantages and limitations of Benchmarking. 6
11. Write notes on any *three* of the following : 3 ∞ 5
- a) Quality circles
 - b) Kaizen
 - c) PDCA cycle
 - d) 7 QC Tools
 - e) House of Quality
 - f) Flexible Manufacturing System.

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