

GUJARAT TECHNOLOGICAL UNIVERSITY
B. E. - SEMESTER – IV • EXAMINATION – WINTER 2012

Subject code: 142502**Date: 31/12/2012****Subject Name: Fundamentals of Quality Management****Time: 02.30 pm - 05.00 pm****Total Marks: 70****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1 (a)** Define “Total Quality Management”. Explain how TQM can be ensured. Enumerate the quality documents and systems needed in TQM. **07**
- (b)** Explain the need of training for Quality Management. Enlist the various quality education and training programs and describe In-house training for TQM. **07**
- Q.2 (a)** Explain the following terms as applied to Quality Control:- **07**
(i) Appraisal Costs (ii) Prevention Costs (iii) Failure Costs (iv) Optimum Costs.
- (b)** Discuss the linkage between Quality and Productivity with suitable examples. **07**
- OR**
- (b)** Describe the need for proper harmonization between design department manufacturing department and inspection department to assure the quality of product. **07**
- Q.3 (a)** State the procedure of constructing OC curve and explain producer’s risk, consumer’s risk, AOQ and AOQL. **07**
- (b)** Define following terms with example:- **07**
(i) Sample and population (ii) Defect and defectives (iii) Acceptance and rejection numbers (iv) Lot and sample size selection.
- OR**
- Q.3 (a)** What are the characteristics a good sampling plan should have? Discuss double sampling plan and multiple sampling plan. **07**
- (b)** Explain the difference between:- **07**
(i) Chance causes and assignable causes (ii) Control limits and tolerance limits (iii) Variables and attributes.
- Q.4 (a)** What do you understand by “Statistical control of production processes?” Explain how a control charts helps to control the quality of a product? **07**
- (b)** Discuss various patterns of variation in X and R chart. Also state the possible causes responsible for such pattern. **07**
- OR**
- Q.4 (a)** Explain the term “Quality Assurance Function”. What do you mean by term “Field complaints”? State the significance of field complaints in quality assurance function. **07**
- (b)** Write short note on “Quality Audit”. **07**
- Q.5 (a)** State the outstanding features of ISO:9000 series of standards. Explain the benefits by becoming an ISO:9000 company. **07**
- (b)** Write short note on “Benchmarking”. **07**
- OR**
- Q.5 (a)** Explain seven tools of Quality control **07**
- (b)** Explain the concept of QFD **07**
