

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-IV (OLD) • EXAMINATION – WINTER 2016

Subject Code: 142502

Date: 24/11/2016

Subject Name: Fundamentals of Quality Management

Time: 02:30 PM to 05:00 PM

Total Marks: 70

Instructions:

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

- Q.1** (a) Write short note on quality management scenario in Indian industries. **07**
(b) Explain concept of QFD with suitable example. **07**

- Q.2** (a) Write short note on capability maturity model (CMM). **07**
(b) Discuss OC curve with neat sketch. Also Explain producer's risks and consumer risks. **07**

OR

- (b) Discuss concept of Six Sigma quality and explain the levels of non-confirming product that could be expected from such a process **07**

- Q.3** (a) Discuss type I error and type II error in hypothesis testing. Explain this in context of quality control setting. **07**

- (b) Construct cause and effect diagram of a process that is producing non confirming items? Discuss some remedial measures. **07**

OR

- Q.3** (a) Define and explain following terms: (1) Optimum Costs (2) Prevention Costs (3) Failure Costs (4) Appraisal Costs. **07**

- (b) What are the new seven management tools of TQM. Briefly explain purpose of each. **07**

- Q.4** (a) Explain in detail the various phases of activity to be carried out by manufacturing organization for obtaining ISO-9001:1994 certificate **07**

- (b) What is strategic quality management (SQM)? How is it defined? Using a schematic diagram, explain the five phases of SQM. **07**

OR

- Q.4** (a) Explain Acceptance Sampling procedure. Discuss single and Double sampling Plan. **07**

- (b) Write short note on "Benchmarking". **07**

- Q.5** (a) Discuss Juran's quality trilogy. **07**

- (b) Explain the differences between X-bar and R-charts. How can they be used together and why would it be important to use them together? **07**

OR

- Q.5** (a) Enumerate Deming's 14 points for the total quality management. Also mention the 7 deadly diseases propounded by Deming. **07**

- (b) Explain the difference between:- **07**
(i) Chance causes and assignable causes (ii) Variables and attributes.
