

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII • EXAMINATION – WINTER • 2014****Subject Code: 171906****Date: 29-11-2014****Subject Name: Quality and Reliability Engineering****Time: 10:30 am - 01:00 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) Discuss views of different Quality Gurus. **07**
(b) Explain 7 New Quality Improvement Tools **07**
- Q.2** (a) Explain Failure Mode and Effect analysis (FMEA) **07**
(b) Explain Total Quality Control **07**
- OR**
- (b) Discuss TQM Implementation and Limitations **07**
- Q.3** (a) Explain Steps in experimental design **07**
(b) Explain KANBAN system **07**
- OR**
- Q.3** (a) Briefly explain Taguchi approach **07**
(b) Explain Methods of Total Productive Maintenance **07**
- Q.4** (a) Short note **07**
(1) Cost of Quality (COQ) system
(2) Bench Marking
- (b) Discuss Advantages and Limitation of Six Sigma **07**
- OR**
- Q.4** (a) Short note **07**
(1) Discrete and continuous distribution
(2) Bench Marking
- (b) Explain Concurrent Engineering list out its merits and demerits **07**
- Q.5** (a) Explain Reliability in terms of Hazard rate and failure density, Conditional probability and multiplication rules **07**
(b) Short note **07**
(1) Mean time to failure
(2) Mean time between failure
- OR**
- Q.5** (a) Short note **07**
(1) Failure data analysis
(2) Mean time to repair
- (b) Explain QS 9000 list out its merits and demerits **07**
