

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VIII (NEW) - EXAMINATION – SUMMER 2017****Subject Code: 2181920****Date: 06/05/2017****Subject Name: Quality Engineering(Department Elective III)****Time: 10:30 AM to 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) Define Quality and Discuss views of different Quality Gurus. **07**
(b) Explain Characteristics and Quality Dimensions of Service Sectors. **07**
- Q.2** (a) Explain 4 basic cost elements covered under “Cost of Quality” system giving at least two examples of each cost element. **07**
(b) What do you mean by quality awards? Explain national and International quality awards. **07**
- OR**
- (b) Explain 7 New Quality Improvement Tools. **07**
- Q.3** (a) Define QFD and Discuss house of quality-product planning matrix. **07**
(b) Explain Concurrent Engineering list out its merits and demerits. **07**
- OR**
- Q.3** (a) Define FMEA. Explain how it helps in ensuring quality of a product. Draw a typical format of FMEA and explain its elements in brief. **07**
(b) Explain basic concepts, scope and implantation barriers of ISO 14000. **07**
- Q.4** (a) What is Design of Experiments (DOE)? What are the components and benefits of DOE? **07**
(b) What is TQM? Explain the principles of Total Quality Management (TQM). **07**
- OR**
- Q.4** (a) What do you understand by the word – Robust Design? How Taguchi Techniques helps achieving robust design of a product? **07**
(b) Define benchmarking along with its three major types. **07**
- Q.5** (a) What are the characteristics and merits of JIT production system? **07**
(b) Briefly explain the concepts of Lean and Agile Manufacturing. Discuss the Advantages offered by these systems to the industries. **07**
- OR**
- Q.5** (a) Explain six sigma concepts? Explain with example Why companies are gradually moving towards achieving six sigma? **07**
(b) Explain World class manufacturing. **07**
