

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VIII (NEW) EXAMINATION – SUMMER 2021****Subject Code:2181920****Date:04/08/2021****Subject Name:Quality Engineering****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) Give any three definitions of Quality. **03**
 (b) Explain briefly the Dimensions of Quality. **04**
 (c) Discuss about the basic 7 Quality Control tools. **07**
- Q.2** (a) What is Quality Circle? Explain its role in industry. **03**
 (b) Discuss the contribution of any one of the Quality Gurus. **04**
 (c) What is the role of ISO 14000 in managing good environmental practices. **07**
- OR**
- (c) Explain the concept of 5S. **07**
- Q.3** (a) Explain the importance of quality awards. **03**
 (b) Discuss seven basic types of wastes. **04**
 (c) What is Total Quality Management (TQM)? Explain the principles of TQM. **07**
- OR**
- Q.3** (a) Explain the principle of concurrent engineering. **03**
 (b) Explain PDCA cycle. **04**
 (c) Describe the preparation of Quality Function Deployment house of quality matrix by giving suitable example. **07**
- Q.4** (a) Describe the concept of Kaizen. **03**
 (b) How Taguchi Techniques helps in achieving robust design of a product? **04**
 (c) Write a short note on FMEA. **07**
- OR**
- Q.4** (a) What is the difference between General Maintenance and Total Productive Maintenance? **03**
 (b) What are the steps involved in experimental design in DOE? **04**
 (c) Explain about basic concept, principle, implementation methodology and application of six sigma. **07**
- Q.5** (a) Explain briefly Bench Marking. **03**
 (b) Discuss the various Quality Dimensions in service sectors. **04**
 (c) What is world class manufacturing? Explain. **07**
- OR**
- Q.5** (a) Discuss Just in Time Concept. **03**
 (b) Explain characteristics of Quality in Service Sectors. **04**
 (c) Briefly explain the concepts of Lean and Agile Manufacturing. **07**