

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER– VIII (NEW) EXAMINATION – WINTER 2021****Subject Code:2181920****Date:25/11/2021****Subject Name:Quality Engineering****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.
4. Simple and non-programmable scientific calculators are allowed.

		Marks
Q.1	(a) Define Quality in three different ways.	03
	(b) Write pros and cons of quality control.	04
	(c) Explain dimensions of quality.	07
Q.2	(a) Draw conceptual framework for quality management.	03
	(b) Define and explain quality circle.	04
	(c) Discuss Role of 5S in quality improvements in manufacturing sectors.	07
OR		
	(c) Give roadmap for implementation of TQM in a manufacturing company.	07
Q.3	(a) Give cause and effect diagram for following:	03
	(i) High cost of textile industry	
	(ii) TQM in Technical Education	
	(b) What is Muda, Muri, and Mura? Explain the various types of Muda.	04
	(c) Enumerate importance and application of design of experiments.	07
OR		
Q.3	(a) What is the difference between product and process quality?	03
	(b) Explain Types of waste and explain regarding how you will eliminate/reduce following wastes:	04
	(i) Waste of movement	
	(ii) Waste of overproduction	
	(c) Explain Taguchi method with various steps.	07
Q.4	(a) Discuss W. Edward's contribution to TQM.	03
	(b) Describe concept of KAIZEN.	04
	(c) Define QFD and discuss house of quality-product planning matrix.	07
OR		
Q.4	(a) What is the difference between General Maintenance and Total Productive Maintenance?	03
	(b) Explain quality function deployment FMEA.	04
	(c) Explain about basic concept, principle, implementation methodology and application of six sigma.	07
Q.5	(a) List meaning each S in 5S.	03
	(b) Explain JIT with real field application.	04
	(c) Explain basic concepts, scope and implantation barriers of ISO 14000.	07

OR

- Q.5** (a) What is Bench Marking? Explain. **03**
(b) Short description of real-life implementation of quality engineering. **04**
(c) Briefly explain the concepts of Lean and Agile Manufacturing. **07**
