

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER– VIII (New) EXAMINATION – WINTER 2019****Subject Code: 2181920****Date: 25/11/2019****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.

		MARKS
Q.1	(a) Define following: (1) Quality (2) TQM (3) Poka yoke.	03
	(b) Discuss the role of Quality Engineer in organization	04
	(c) Explain Seven tools of Quality Improvements.	07
Q.2	(a) Define Zero defects. Discuss various steps in implementing Zero defects.	03
	(b) Explain any two TQM models.	04
	(c) Discuss various Quality costs	07
	OR	
	(c) Discuss Role of 5S in quality improvements in manufacturing sectors.	07
Q.3	(a) Define following: (1) Parameter Design (2) System Design (3) Tolerance Design	03
	(b) Discuss seven basic types of waste.	04
	(c) Explain Taguchi method. Discuss various steps in Taguchi method	07
	OR	
Q.3	(a) Compare Lean and Agile manufacturing system	03
	(b) Discuss various Quality dimensions in service sectors.	04
	(c) Explain “Quality Triology” as given by J.M.Juran.	07
Q.4	(a) Explain the process of operation of Quality Circle.	03
	(b) What is six sigma? Compare Six sigma and TQM.	04
	(c) Explain Pre-requisites of JIT . Also, Discuss the Elements of JIT	07
	OR	
Q.4	(a) Define Benchmarking with its types.	03
	(b) Discuss Implementations Requirements and barriers in TQM.	04
	(c) Explain QFD. Discuss house of Quality –product planning matrix	07
Q.5	(a) Discuss Concurrent Engineering.	03
	(b) Discuss FMEA. Draw the format of FMEA.	04
	(c) Explain basic concepts, scope and implantation barriers of ISO 14000	07
	OR	
Q.5	(a) Discuss PDCA cycle	03
	(b) List various tools and techniques of KAIZEN. Also discuss any two of them	04
	(c) Explain World class manufacturing system	07
