

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII (NEW) EXAMINATION – WINTER 2023****Subject Code:3172507****Date:19-12-2023****Subject Name: Quality Engineering and Management****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 Strategic quality management with suitable example.	03
	(b) Discuss ISO. Describe benefits of ISO 14000 certification.	04
	(c) Explain Ishikawa diagram with suitable example.	07
Q.2	(a) Explain quality system standards.	03
	(b) Write a short note on Agmark Grading and standardization.	04
	(c) As natural resources become scare, discuss the role of ISO 14000 in promoting good environmental management practices.	07
	OR	
	(c) Explain Juran's contribution to TQM in details	07
Q.3	(a) Classify the services in details.	03
	(b) Explain characteristics of effective quality circles.	04
	(c) Write a short note on Total productive maintenance (TPM).	07
	OR	
Q.3	(a) Differentiate prevention costs and appraisal costs.	03
	(b) Discuss control charts for variables.	04
	(c) Define “Total Quality Management”. Explain how TQM can be ensured. Enumerate the quality documents and systems needed in TQM.	07
Q.4	(a) Define Quality assurance.	03
	(b) Differentiate between patent & copyright. Explain with suitable examples.	04
	(c) Enlist Crosby’s Fourteen steps.	07
	OR	
Q.4	(a) Differentiate between variables & attributes.	03
	(b) Enlist and define seven magnificent quality tools.	04
	(c) Discuss Taguchi’s philosophy for quality improvement. Discuss his loss function and its contributions.	07
Q.5	(a) Explain QFD.	03
	(b) Differentiate between Explain Producer’s and Consumer’s risks	04
	(c) What are the advantages of using quality function deployment? What are some key ingredients that are necessary for its success?	07
	OR	
Q.5	(a) Briefly explain the meaning of six- sigma.	03
	(b) Discuss the importance of IPR.	04
	(c) Explain construction and use of Operational characteristic curve.	07
