Seat No.: _____

Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER– VIII (New) EXAMINATION – WINTER 2019

Subject Code: 2182003   **Date: 25/11/2019**

Subject Name: Quality Assurance & Reliability

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)**	Define quality for different view.	**03**
	(b)	Explain Quality Budget and vendor selection of development.	**04**
	(c)	Explain KAIZEN. Also give advantages and application.	**07**
Q.2	**(a)**	Explain registration process of ISO And benefits of ISO.	**03**
	(b)	Explain different stages in Quality Assurance.	**04**
	(c)	Define following terms.	**07**

        i)   Failure Rate
        ii)   Failure density
        iii)   Mean time to failure
        iv)   Bayes Theorem
        v)   Hazard rate
        vi)   Probability of failure

OR

	(c)	Explain Types of sampling and Importance, benefits and limitations.	**07**
Q.3	**(a)**	Explain PDCA cycle.	**03**
	(b)	Explain Deming's approach.	**04**
	(c)	Explain principles of TQM and also Pillar of TQM.	**07**

OR

Q.3	**(a)**	Explain Juran's Approach.	**03**
	(b)	Write short note on ISO 9000.	**04**
	(c)	Explain Type of Audit.	**07**
Q.4	**(a)**	Explain Elements Of probability.	**03**
	(b)	Write short note on Hazard Models.	**04**
	(c)	Explain Six Sigma with Example.	**07**

OR

Q.4	**(a)**	Define Multiplication Rule and Example.	**03**
	(b)	Define JIT.Give Advantages, Limitation JIT.	**04**
	(c)	Explain Bathtub Curve. Give advantages, limitation and application.	**07**
Q.5	**(a)**	Explain Characteristics of Quality Circle.	**03**
	(b)	Explain Cause & effect diagram.	**04**
	(c)	Explain Reliability of series and parallel connected system.	**07**

OR

Q.5	**(a)**	Explain Reliability Engineering Fundamentals.	**03**
	(b)	Explain bayes theorem. Give example.	**04**
	(c)	Write short note on Element Redundancy,unit Redundency and standby Redundency.	**07**