Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE SEMESTER–IV • EXAMINATION – SUMMER 2015

Subject Code: 143402 **Date:01/06/2015**

Subject Name: Metrology and Computer Aided Inspection

Time: 10.30AM-01.00PM **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)**	Explain the difference between Precision and accuracy with example.	**07**
	(b)	Differentiate between, Systematic error and Random error.	**07**
Q.2	**(a)**	Explain use of height gauge , with neat sketch	**07**
	(b)	Explain working principle of Micrometer with neat sketch.	**07**
		OR	
	(b)	State types of vernier calipers and explain its working principle .What is L.C.?	**07**
Q.3	**(a)**	Explain Bevel protractor with working principle by neat sketch	**07**
	(b)	What is spirit level? Where it is used?	**07**
		OR	
Q.3	**(a)**	State use of Tomlinson surface meter, explain its working principle	**07**
	(b)	Define following terms, 1.waviness 2.lay 3. sample length 4.flaws	**07**
Q.4	**(a)**	Explain how does Laser Micrometer works to measure different diameters.	**07**
	(b)	Write short note on working of Tool makers Microscope	**07**
		OR	
Q.4	**(a)**	Explain the concept involved in POKA-YOKE.	**07**
	(b)	Explain Quality assurance .and Quality	**07**
Q.5	**(a)**	What do you mean by image analysis in image processing?	**07**
	(b)	What is a Graw scale model? Explain its application in measurement.	**07**
		OR	
Q.5	**(a)**	Define total quality control. Explain how it is important in measurement?	**07**
	(b)	Write short note on interchangeability.	**07**

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