

GUJARAT TECHNOLOGICAL UNIVERSITY
B.VOC. SEMESTER- I- EXAMINATION – SUMMER 2019

Subject Code: 1110304**Date: 06/06/2019****Subject Name: Metrology and Measuring Instruments****Time: 10:30AM to 12:30PM****Total Marks: 50****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

		Marks
Q.1	(a) Differentiate between precision and accuracy with suitable example.	05
	(b) Describe errors and sources of errors.	05
Q.2	(a) Give classification of comparators and explain Dial indicator with sketch.	05
	(b) Distinguish between Primary, Secondary, Tertiary and working standards of length.	05
OR		
	(b) Explain construction and working of Reed type mechanical comparator.	05
Q.3	(a) Explain the methods of measuring surface finish.	05
	(b) Define : (1) Primary texture and (2) Secondary texture	05
OR		
Q.3	(a) Describe with sketch the construction and working of sigma comparator.	05
	(b) Explain the characteristics of good comparator.	05
Q.4	(a) Describe with neat sketch the construction and working of Vernier calliper.	05
	(b) Explain construction and use of vernier bevel protractor.	05
OR		
Q.4	(a) Explain Optical Pyrometer.	05
	(b) Enlist various instruments used for thread and gear measurement and explain any one in detail.	05
Q.5	(a) Explain construction and working of sine bar with neat sketch.	05
	(b) Describe defects likely to occur in measuring instruments and their remedies.	05
OR		
Q.5	(a) Explain bourdon tube type pressure gauge.	05
	(b) Define : (1) Straightness (2) Flatness (3) Circularity(4) Parallelism (5) Squareness	05
