PRN:		Course Code :	UME 304

Second Year **B. Tech** Semester End Examination Winter 2024 000159

Mechanical Standards for Measurement

Day and Date: Fri 29.11.2024 Max Marks: **50**

Time : 10:30AM To 12:30PM Duration: **02** hrs

Instructions: All questions are compulsory.

			Marks	Bloom's Level	CO
Q.1		**Attempt any two from the following**			
	a)	Explain different types of Limits with examples.	06	2	1
	b)	Explain different types of fits with examples.	06	2	1
	c)	Explain fundamental Deviation with the neat sketch Hole basis system and shaft basis system.	06	2	1
Q.2		**Attempt any two from the following**			
	a)	Classify Comparators and describe the advantages and disadvantages of each type.	06	2	2
	b)	Describe with neat sketch how standard rollers and balls can be used for angle measurement.	06	2	2
	c)	State advantages and disadvantages of mechanical comparator over Pneumatic comparator.	06	2	2
Q.3		**Attempt the following**			
	a)	Describe "Principle of interferometry and its application for checking flatness"	06	2	3
	b)	Define Straightness and flatness and explain briefly how Straightness and flatness is measured.	07	2	3
		OR			
	b)	Define the following terms of surface roughness. i) The lay ii) Roughness height iii) Roughness width iv) Roughness width cut off	07	2	3
Q.4		**Attempt the following**			
	a)	Describe the Vernier caliper and explain its use for checking tooth thickness.	06	2	4
	b)	List the types of Errors in gear and explain any three.	07	2	4
		OR			
	b)	Write note on CMM	07	2	4

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