III B. Tech I Semester Regular Examinations, February-2022
MECHANICAL MEASUREMENTS & METROLOGY
(Mechanical Engineering)

Time: 3 hours   Max. Marks: 75

Answer any **FIVE** Questions **ONE** Question from **Each unit**
All Questions Carry Equal Marks
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UNIT-I

1.	a)	What are the sources of error in measurement system? Explain in detail.	[8M]
	b)	Give the classification of errors.	[7M]

(OR)

2.	a)	Explain the construction and working of piezoelectric transducer.	[8M]
	b)	Briefly explain the working of non contact type transducer.	[7M]

UNIT-II

3.	a)	Describe the working of electrical strain gauge with a neat sketch.	[8M]
	b)	What are the strain gauge rosettes?	[7M]

(OR)

4.	a)	Explain the construction of elastic force meter.	[8M]
	b)	Give the principle of seismic instruments.	[7M]

UNIT-III

5.	a)	Differentiate Unilateral system and Bilateral system.	[8M]
	b)	Explain Hole basis system and Shaft basis system.	[7M]

(OR)

6.	a)	Define Taylor's principle and explain.	[8M]
	b)	What are Plug gauges and Ring gauges? Explain.	[7M]

UNIT-IV

7.	a)	Explain about Line standards and End standards.	[8M]
	b)	Give the process of calibration of Micrometer.	[7M]

(OR)

8.	a)	Explain the construction and working of Sine Bar?	[8M]
	b)	Describe the working of Bevel Protractor with a neat sketch?	[7M]

UNIT-V

9.	a)	Clearly illustrate the working of Taylor Hobsun Taly Surf?	[8M]
	b)	Describe the three wire method for measuring effective diameter?	[7M]

(OR)

10.	a)	Give the types of errors in Gears and checking of errors.	[8M]
	b)	What are the errors in Screw threads?	[7M]

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