

**CERTIFICATE IN CONDITION
MONITORING (CCOMO)
Term-End Examination
December, 2025**

**MET-001 : METROLOGY, INSTRUMENTATION
AND TRIBOLOGY**

Time : 3 Hours

Maximum Marks : 100

Note : (i) Attempt any **seven** questions.

(ii) All questions carry equal marks.

1. (a) What are the standards of measurement and their classification ? 5
- (b) What is fit ? What are the types of fit ? Explain briefly with suitable examples. 5
2. (a) Define Metrology. What is the necessity and importance of metrology ? 5

- (b) What are the systems of specifying tolerances ? Explain briefly. 5
3. Define the following terms : 5×2=10
- (a) Errors
 - (b) Calibration
 - (c) Precision
 - (d) Gauge
 - (e) Secondary standards
4. What is comparator ? Compare mechanical comparator with electrical comparator. 10
5. (a) What are the slip gauges ? How are they used with sine bar ? Discuss in detail. 5
- (b) What is error in measurement ? Classify errors and describe each class.5
6. Explain the working of clinometer with a neat sketch. 10
7. (a) What is strain gauge ? What does it measure and what is gauge factor ? 5
- (b) How do you obtain increased size of image from a projector ? 5

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8. Give a brief description about the important parts of a Co-ordinate Measuring Machine (CMM) 10
9. Write short notes on any *four* of the following : 4×2.5=10
- (a) Galvanizing
 - (b) Viscosity
 - (c) Oilness
 - (d) Volatility
 - (e) Lubrication
 - (f) Friction

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