

**CERTIFICATE IN CONDITION  
MONITORING  
(CCOMO)**

**Term-End Examination  
June, 2024**

**MET-002 : MECHATRONICS**

*Time : 3 Hours*

*Maximum Marks : 70*

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

(ii) All questions carry equal marks.

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1. Distinguish between any *four* of the following :

$$2\frac{1}{2} \times 4 = 10$$

- (a) Proximity switch and Limit switch
  - (b) Thermocouple and thermistors
  - (c) Pneumatic system and Hydraulic system
  - (d) Shunt wound motors and Series wound motors
  - (e) Microprocessor and CPU
2. Describe the working of a cam controlled system with the help of a neat sketch. 10

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3. What is transducer ? Enlist the various characteristics of transducer. 10
4. Discuss the performance characteristics of compressor in detail. 10
5. Explain the working principle of servo motor with the help of a schematic diagram. 10
6. What is ZOH ? Explain its significance in digital system. 10
7. Describe the process of sequential control using PLCs in detail. 10
8. Explain the *two* types of data transfer technique used in computer interfacing. 10
9. Describe the working of a continuous type intensifier. 10
10. Write short notes on any *two* of the following :  
5+5=10
  - (a) Pressure relief valve
  - (b) Static and dynamic response of sensor
  - (c) Fleming's left hand rule
  - (d) Parallel data communication

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