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MET-002

**CERTIFICATE IN CONDITION
MONITORING
(CCOMO)**

**Term-End Examination
December, 2023**

MET-002 : MECHATRONICS

Time : 3 Hours

Maximum Marks : 70

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

(ii) All questions carry equal marks.

1. Distinguish between the following :
 - (a) Closed loop and open loop control system 5
 - (b) Pressure relief valve and a pressure reducing valve 5
2. (a) Describe the working of any CAM controlled system. 5
- (b) What are the desired qualities of a hydraulic oil ? 5
3. Briefly explain the principles of operation of proximity switch and photoelectric sensors. 10

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4. Explain the methods for range sensing with the help of suitable example. 10
5. (a) Explain the working principle of a Relay. 5
(b) Draw torque speed curve for a stepper motor. 5
6. (a) What are the advantages and limitations of PLC over microcomputer ? 5
(b) Discuss the applications of counters in Industrial control system. 5
7. Describe various method of speed control of a D. C. motor. 10
8. Describe the working of a continuous type intensifier. 10
9. Write short notes on any *two* of the following : 5 each
 - (a) Dead weight accumulator
 - (b) Retentive on Delay Timer (RTO)
 - (c) Robot wrist sensor
 - (d) Ball screw

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