Course Code: 1940318   **Roll No:**   MLRS- R19

MARRI LAXMAN REDDY
INSTITUTE OF TECHNOLOGY AND MANAGEMENT
(AN AUTONOMOUS INSTITUTION)
(Approved by AICTE, New Delhi & Affiliated to JNTUH, Hyderabad)
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MLRS
EMPOWERING THROUGH INNOVATIONS

II B.Tech II SEM Regular End Examination, August 2021
INSTRUMENTATION AND CONTROL SYSTEMS
(MECH)

Time: 3 Hours.   **Max. Marks: 70**

Note: 1. Answer any FIVE questions.
      2. Each question carries 14 marks and may have a, b as sub questions.

1	a)	Define measurement. Discuss different methods of measurement. Explain in detail.	7M	CO1	BL1
	b)	What are performance characteristics? Explain any 5 static performance charectristicsperformance characteristics.	7M	CO1	BL2
2	a)	What is transducer? Explain the working of capacitive transducer.	7M	CO1	BL2
	b)	Explain following dynamic performance charecteristics (i)fidelity(ii)overshoot(iii)speed of response(iv)overshoot	7M	CO1	BL2
3	a)	With help of neat and suitable sketch, explain RTD. Write its advantages and disadvantages.	7M	CO2	BL3
	b)	What is the working principle of Mc leod guage? With the help of neat sketch explain it?	7M	CO2	BL3
4	a)	What is pyrometer? With a neat sketch explain the working of a total radiation pyrometer. What are its advantages and limitations?	7M	CO3	BL3
	b)	Sketch and explain in detail working of ultrasonic liquid level indicator?	7M	CO3	BL3
5	a)	What are non-contact type tachometers? Explain working of stroboscope with suitable sketch?	7M	CO4	BL2
	b)	Sketch and explain in detail working of bubbler liquid level indicator?	7M	CO4	BL3
6	a)	Define strain? Compare bonded and unbounded strain gauges?	7M	CO4	BL4
	b)	Explain with a neat sketch absorption hygrometer. Write its advantages and disadvantages.	7M	CO4	BL2
7	a)	With the help of neat sketch explain in detail working of proving ring?	7M	CO4	BL2
	b)	Distinguish between open and closed loop control system? Explain with suitable examples?	7M	CO6	BL2
8	a)	Distinguish between manual control system and automatic control system?	7M	CO6	BL2
	b)	What is servomechanism? Sketch and explain position control using servo motor?	7M	CO6	BL3

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