MARRI LAXMAN REDDY
INSTITUTE OF TECHNOLOGY AND MANAGEMENT
(AN AUTONOMOUS INSTITUTION)
(Approved by AICTE, New Delhi & Affiliated to JNTUH, Hyderabad)
Accredited by NBA and NAAC with 'A' Grade & Recognized Under Section2(f) & 12(B)of the UGC act,1956

MLRS

II B.Tech II SEM Supply End Examination, March 2022
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)	State and explain the desirable static and dynamic characteristic of an instrument?	7M	CO1	BL4
	b)	How is ionization transducer used to measure displacement? Explain?	7M	CO1	BL1
2	a)	Explain peizo-electric transducer and write its applications.	7M	CO1	BL4
	b)	With the help of block diagram explain in detail the generalized measurement system?	7M	CO1	BL4
3	a)	With a neat sketch explain the working of bimetallic strip? What are its advantages and limitations?	7M	CO2	BL1
	b)	Explain with a neat sketch working of bourdon tube pressure guage? What are its advantages and limitations?	7M	CO2	BL4
4	a)	Explain with a neat sketch working of total radiation pyrometer? What are its advantages and disadvantages?	7M	CO2	BL4
	b)	Describe the working of cryogenic level indicater.what are its advantages and limitations?	7M	CO3	BL2
5	a)	What is accelerometer?with the help neat sketch explain in detail piezo electric accelerometer	7M	CO3	BL1
	b)	With help of neat and suitable sketches explain in detail hot wire anemometer? Write its advantages and disadvantages?	7M	CO3	BL1
6	a)	With help of suitable sketch explain bonded, unbondedd strain guage?	7M	CO4	BL4
	b)	Sketch and explain the constructional details and working of a dew point meter?	7M	CO5	BL4
7	a)	How the torque is measured using strain guage torsion meter? Explain it with neat and suitable sketch?	7M	CO5	BL1
	b)	Why use of block diagram is preferred for closed loop system? Explain principle and working closed loop system with neat diagram?	7M	CO5	BL4
8	a)	Explain the working of a system used for automatic control of temperature of a room?	7M	CO	BL4
	b)	Describe a speed control system for controlling the speed of an IC engine?	7M	CO	BL2