R20 Regulation *Subject code: 3P5CE*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A+' Grade)

B.Tech V Semester Supplementary Examinations, April 2026

INSTRUMENTATION CONTROL SYSTEM

(ME)

Maximum Marks: 70 Date: 24.04.2026 Duration: 3 hours

Note: **1.This question paper contains two parts A and B.**
2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
3. Part B consists of 5 Units. Answer any one full question from each unit.
4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks (10X2M=20 Marks)		Marks	CO	BTL
1	Define Piezo electric transducer.	2M	1	L1
2	List any two measurements of Levels.	2M	1	L1
3	List the two types Flow measurement.	2M	2	L1
4	Define Photo electric transducers.	2M	2	L1
5	Write Principles of Seismic instruments.	2M	3	L1
6	Classification and elimination of error.	2M	3	L1
7	What are the two modes of controller?	2M	4	L1
8	Define Bourdon pressure gauges.	2M	4	L1
9	Define Bellows - Diaphragm gauges.	2M	5	L1
10	What McLeod pressure gauge?	2M	5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	BTL
11	Write a short notes on Open and closed systems Servomechanisms.	10M	1	L2
	OR			
12	Explain with sketch of piezo electric transducer.	10M	1	L2
13	Explain ionization gauge with a neat sketch.	10M	2	L2
	OR			
14	What is Laser Doppler Anemometer (LDA) with sketch?	10M	2	L2
15	Explain Torsion meters, Dynamometers.	10M	3	L2
	OR			
16	Write short notes on ionization and Photo electric transducers.	10M	3	L2
17	Explain Electrical Humidity sensing Absorption Hygrometer.	10M	4	L2
	OR			
18	Write short notes on cryogenic fuel level indicators.	10M	4	L2
19	Briefly explains Vibro meter and accelerator meter.	10M	5	L2
	OR			
20	Explain classification of control system & types of control system with diagram.	10M	5	L2