BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID SEMESTER EXAMINATION MO/2024)

CLASS: BTECH **SEMESTER : III/ADD**
BRANCH: ECE **SESSION : MO/2024**

SUBJECT: EC207 ELECTRONIC MEASUREMENTS

TIME: 02 Hours **FULL MARKS: 25**

INSTRUCTIONS:
1. The question paper contains 5 questions each of 5 marks and total 25 marks.
2. Attempt all questions.
3. The missing data, if any, may be assumed suitably.
***4*. Tables/Data handbook/Graph paper etc., if applicable, will be supplied to the candidates**

			CO	BL
Q.1(a)	Why is calibration important for measuring instruments?	[2]	1	4
Q.1(b)	What is drift? Explain the different types of drifts.	[3]	1	1
Q.2(a)	An ammeter reads 6.7 A and the true value of current is 6.54 A. Determine the error and correction for this instrument.	[2]	1	3
Q.2(b)	Explain the method to find the presence of hysteresis in measuring instruments.	[3]	1	5
Q.3(a)	Define the terms (i) accuracy and (ii) Linearity with help of suitable diagrams.	[2]	1	2
Q.3(b)	Define the terms “indicating instruments”, “Recording Instruments” and “Integrating Instruments”. Give examples of each case.	[3]	2	2
Q.4(a)	What are the requirements of a shunt used in DC ammeters?	[2]	2	4
Q.4(b)	Describe the construction and working of PMMC instrument. Derive the equation for deflection if the instrument is spring controlled.	[3]	2	3
Q.5(a)	Which among Series and shunt type ohmmeter, is generally considered better for different measurement scenarios, and why?	[2]	2	4
Q.5(b)	Explain the working of DC Voltmeter with Chopper type DC Amplifier with its Circuit diagram.	[3]	2	3

::::::20/09/2024::::::E