

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID SEMESTER EXAMINATION SP/2025)

CLASS: BMLT
BRANCH: BMLT

SEMESTER : IV
SESSION : SP/2025

SUBJECT: BMT411 BIO-SIGNAL ACQUISITION SYSTEM

TIME: 03 Hours

FULL MARKS: 50

INSTRUCTIONS:

1. The question paper contains 5 questions each of 10 marks and total 50 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.
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		CO	BL
Q.1(a)	How do bio-signals originate in the living system?	[5] CO1	4
Q.1(b)	Mention the origin of different bio-signals with physiological relevance.	[5] CO1	2
Q.2(a)	How do electrodes convert ionic potential into electrical potential?	[5] CO2	3
Q.2(b)	List various transducers used in recording physiological activity.	[5] CO2	2
Q.3(a)	Why is an instrumentation amplifier preferred over other amplifiers?	[5] CO3	4
Q.3(b)	Classify different types of biomedical amplifiers.	[5] CO3	2
Q.4(a)	What is telemetry system?	[2] CO3	2
Q.4(b)	List the various components of a telemetry system.	[3] CO2	2
Q.4(c)	Explain a physiological telemetry system.	[5] CO4	3
Q.5(a)	What are biomedical recorders?	[2] CO1	2
Q.5(b)	Mention different types of biomedical recorders.	[3] CO4	2
Q.5(c)	What is the principle of operation of strip chart recorder	[5] CO4	3

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