

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: 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
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		CO	BL
Q.1(a)	What are signals?	[2] CO1	2
Q.1(b)	Mention the origin of different bio-signals with physiological relevance.	[3] CO1	2
Q.2(a)	How do bio-signals originate in the physiological system?	[2] CO1	3
Q.2(b)	Explain the action potential curve using a neat and labeled diagram.	[3] CO1	2
Q.3(a)	Explain the process in the generation of cardiac potential.	[2] CO1	2
Q.3(b)	Classify different transducers with physiological relevance.	[3] CO2	3
Q.4(a)	Define transducers.	[2] CO2	2
Q.4(b)	Explain the architecture of disposable electrodes.	[3] CO2	2
Q.5(a)	What are the common noises recorded in the acquisition of bio-signals?	[2] CO2	3
Q.5(b)	How do electrodes convert ionic potential into electrical potential?	[3] CO2	3

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