

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)**

**CLASS: BMLT
BRANCH: BMLT**

**SEMESTER: III
SESSION: MO/2024**

SUBJECT: BMT303 BIOMEDICAL INSTRUMENTATION

TIME: 3 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. Before attempting the question paper, be sure that you have got the correct question paper.
 5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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		CO	BL
Q.1(a)	Describe the factors in designing biomedical instrumentation.	[5]	1 3
Q.1(b)	Explain different problems in measuring a living system.	[5]	1 3
Q.2(a)	Describe the man-instrument system used to record the cardiac activity.	[5]	3 3
Q.2(b)	Explain the 10-20 electrode placement in recording the brain activity with a neat and labeled diagram.	[5]	2 3
Q.3(a)	Describe the operation of the Anesthesia machine with a neat and labeled diagram.	[5]	3 3
Q.3(b)	Describe the classification of pacemakers.	[5]	2 3
Q.4(a)	Explain the operation of colorimeter.	[5]	2 2
Q.4(b)	Explain the role of biochemical analyzer in healthcare.	[5]	2 2
Q.5(a)	Describe the mechanism in generation of x-rays using a neat and labeled diagram.	[5]	3 4
Q.5(b)	Explain the process of image formation using X-ray.	[5]	3 4

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