

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

CLASS: MSC/IMSC
BRANCH: ALL

SEMESTER : II/VIII
SESSION : SP/2023

SUBJECT: BT427 BIOMEDICAL EQUIPMENT AND DEVICES

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.
-

		CO	BL
Q.1(a)	Describe the electrode placement method in recording 12-channel electrocardiogram signal.	[5] 1	2
Q.1(b)	Illustrate the instrumentation in recording brain signals.	[5] 2	3
Q.2(a)	Demonstrate different components of anesthesia machine using schematic diagram.	[5] 2	3
Q.2(b)	Describe the optical method in pulse plethysmography technique.	[5] 2,3	2
Q.3(a)	Classify different types of pacemaker systems.	[5] 2	4
Q.3(b)	Demonstrate the working of nerve and muscle stimulator using schematic diagram.	[5] 2,4	3
Q.4	Write short notes on		
Q.4(a)	Extra corporeal membrane oxygenation	[5] 2	2
Q.4(b)	Intra-aortic balloon pump	[5] 2	2
Q.5(a)	Explain the functioning of blood cell counter.	[5] 2	2
Q.5(b)	Describe the operation of biochemical analyzer with applications.	[5] 2	2

::::::01/05/2023::::::E