

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER- VI(NEW) – EXAMINATION – SUMMER 2019

Subject Code: 2160303

Date: 16/05/2019

Subject Name: Therapeutic Techniques & Instrumentation

Time: 10:30 AM TO 01:00 PM

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

		MARKS
Q.1	(a) Explain needs of DC Defibrillator.	03
	(b) Explain different types of Dialyzers.	04
	(c) Explain DC Defibrillator with circuit diagram.	07
Q.2	(a) Define: Fulguration, Coagulation, and Desiccation.	03
	(b) Explain working of Advisory External Defibrillator.	04
	(c) Explain Programmable implantable pacemaker with block diagram.	07
	OR	
	(c) Explain Safety aspects of Electrosurgical Unit.	07
Q.3	(a) Describe VVI code for Pacemaker.	03
	(b) Explain Different types of Defibrillator electrodes.	04
	(c) Explain Haemodialysis machine with schematic diagram.	07
	OR	
Q.3	(a) Explain Properties of LASER.	03
	(b) Explain Ultrasonic therapy unit with block diagram.	04
	(c) Explain Microwave diathermy machine with the help of a circuit diagram.	07
Q.4	(a) Explain physiological heat balance method in baby incubator.	03
	(b) Explain working of Heart Lung Machine.	04
	(c) Explain generation of CO ₂ LASER with its applications.	07
	OR	
Q.4	(a) Describe structure and function of Cardiac Stents.	03
	(b) Explain Mechanics of Artificial Ventilation.	04
	(c) Explain generation of Ruby LASER with its applications.	07
Q.5	(a) What is Biotelemetry? Write its applications.	03
	(b) Explain performance Analysis of Dialyzers.	04
	(c) Explain Anesthesia Machine with the help of schematic diagram.	07
	OR	
Q.5	(a) Describe Spinal cord stimulator.	03
	(b) Explain Asynchronous and Synchronous mode of pacemaker.	04
	(c) Explain Shortwave diathermy machine with the help of circuit diagram.	07
