# **Question Paper Code: 55B02**

#### B.E. / B.Tech. DEGREE EXAMINATION, DEC 2020

#### Fifth Semester

## **Biomedical Engineering**

## 15UBM502- DIAGNOSTIC AND THERAPEUTIC EQUIPMENTS-II

(Regulation 2015)

		(Regi	11ation 2013)			
Duration: One hour			M	Maximum: 30 Marks		
		PART A -	$(6 \times 1 = 6 \text{ Marks})$			
		(Answer any six of	f the following questi	ons)		
1.	Before placing the	electrodes the skin sl	nould be		CO1- F	
	(a) Wet	(b) Dry	(c) Hairy	(d) Oily		
2.	The Echoencephalogram can involve recording of electrical potential form					
	(a) Groups of neuro	ons via electrodes pla	ced on the scalp	(b) Single neuro	ons	
	(c) Groups of neurons via electrodes inserted into the brain (d) All of the about					
3.	In respiration, raw material is converted into				CO2- F	
	(a) water only		(b) carbon dioxi	de and energy		
	(c) water and energ	gy	(d) water, carbo	n dioxide and energ	gy	
4.	Ventilators are prin	narily used in			CO2- F	
	(a) Intensive care n	nedicine	(b) Home care			
	(c) Emergency medicine		(d) All of the ab	(d) All of the above		
5.	Electro Retinograp	h measures			CO3- F	
	(a) Electrical activity of the heart		(b) Electrical ac	(b) Electrical activity of the brain		
	(c) Electrical activity of the muscle (d) Electrical activity of the eye					
6.	Letter F in the EEG electrode placement system denotes?				CO3- F	
	(a) Front	(b) Face	(c) Frontal Lobe	e (d) Fast		

CO<sub>4</sub>- R

The indications for continuous short wave diathermy is

7.

	(a) Relief pain and muscle spasm	(b) Increase blood flow				
	(c) Increase rate of cell metabolism	(d) Increase joint stiffness				
8.	Which of the diathermy machine is good for deep tissue healing?					
	(a) short wave	(b) ultrasound				
	(c) cold compress	(d) electrical impulse				
9.	Micro shocks may occur			CO5- R		
	(a) Due to flow of 1A current flow across the body surface					
	(b) Due to 5A current flow across the body for one minute					
	(c) Due to shortening of electrical leads in the pacemaker					
	(d) Due to flow of few mA current across the cardiac muscles					
10.	The main reason electrical injuries occur is:					
	(a) Because electrical injuries are a way of life and cannot be avoided					
	(b) Electrical systems for the most part are extremely dangerous					
	(c) Procedures are inappropriate, procedures are not followed or ignored, and safety systems are bypassed.					
	(d) There is no such thing as an electrical inju	ury.				
	PART – B (3	x 8= 24 Marks)				
	(Answer any three of	the following questions)				
11.	What is Echoencephalograph? Discuss ir diagram of Echoencephalograph.	detail about the block	CO1- U	(8)		
12.	Illustrate the function of human lung and exp	olain lung volume and	CO2- U	(8)		
	breathing measurements.					
13.	Explain the function and applications of Elec	• •	CO3- Ana	` ′		
14.	Classify and explain the various types diather		CO4 -U	(8)		
15.	What are the basic approaches followed to provide about the protection equipment design.		CO5- U	(8)		