

NADAR SARASWATHI COLLEGE OF ENGINEERING AND TECHNOLOGY, THENI.

Course/Branch : B.E /CSE	Year / Semester :IV/VII	Format No.	NAC/TLP-07a.13
Subject Code :OEC754	Subject Name :MEDICAL ELECTRONICS	Rev. No.	02
Unit No :1	Unit Name :Electro-Physiology And Bio-Potential Recording	Date	30.09.2020

OBJECTIVE TYPE QUESTION BANK

S. No.	Objective Questions (MCQ /True or False / Fill up with Choices)	BTL
1	Source of Bioelectric potential is _____ in nature. a) electronic b) electric c) ionic d) mechanical	L2
2	The variation of the electrical potential associated with the passage of a pulse along the membrane of a muscle cell or a nerve cell is called _____. a) muscle potential b) action potential c) resting potential d) half cell potential	L2
3	Electrooculography (EOG/E.O.G.) is a technique for measuring what? a) abnormal function of the retina b) heart rate c) respiration rate d) cornea-retinal standing potential	L4
4	Phonocardiography is listening to _____. a) arm muscle sound b) lungs sound c) heart sound d) respiratory tract sound	L5
5	Recording electrical activities associated with heart is known as _____. a) EEG b) EOG c) EMG d) ECG	L1
6	Which of the following is considered to be the primary pacemaker of the heart? a) sino-atrial node b) atrio-ventricular node c) purkinje fibres d) bundle of his	L2
7	Before placing the electrodes the skin should be _____. a) wet b) dry c) hairy d) oily	L3
8	Which of the following is a preferred electrode for measuring EMG? a) surface electrodes b) needle electrodes c) pregelled electrodes d) scalp electrodes	L5
9	Which electrode can be used to pick up signals from individual fibers of muscle tissues?	L6

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	a) bipolar needle electrode b) concentric core needle electrode c) multi-element needle electrode d) monopolar needle electrode	
10	The contraction of the skeletal muscles results in the generation of action potential in the individual muscle fibers. Record of this action potential is called _____ a) ECG b) EMG c) EEG d) EKG	L6
11	In voluntary contraction of the skeletal muscles, the muscle potential ranges from _____ a) 50 uV – 5 mV b) 50 mV – 5 V c) 0.05 uV – 2 mV d) 50 mV – 500 mV	L3
12	Which rhythm is the principal component of the EEG that indicates the alertness of the brain? a) theta rhythm b) gamma rhythm c) beta rhythm d) alpha rhythm	L4
13.	Which type of electrodes are employed to study the electrical activities of individual cells? a) milli-electrodes b) micro-electrodes c) surface-electrodes d) pre-jelled electrodes	L4
14	Do metallic micro electrodes exist. a) True b) False	L2
15.	Which of the following metal is preferred for manufacturing micro electrodes? a) Stainless steel b) Tungsten c) Iron d) Copper	L1
16.	_____ are devices which convert one form of energy into another. a) transducers b) electrodes c) impulses d) opamp	L3
17.	Parallel flow dialyzer has a low internal resistance. Because of this blood pump is required. a) True b) False	L5
18.	The volume of blood within the dialyzer is known as _____ a) secondary volume	L3

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	b) quarterly volume c) priming volume d) residual volume	
19.	The delta wave in EEG ranges from _____ a) 0.5-4Hz b) 4-8Hz c) 8-13Hz d) 13-22Hz	L3
20.	Which of the following instrument is used for recording the electrical activity of the brain? a) ECG b) EMG c) PCG d) EEG	L4
21.	EEG electrodes are larger in size than ECG electrodes. a) True b) False	L2
22.	_____ is the superimposed wave of neuron potentials operating in a non-synchronized manner in a physical sense. a) VCG b) ECG c) EEG d) PCG	L5
23	Which of the following is material is used to improve electrical contact? a) Silver Tungsten b) Electrode jelly c) Silver Graphite d) Copper Tungsten	L5
24	What are generally designed to have a very high value of input impedance to take care of high electrode impedance? a) Montages b) Electrodes c) Preamplifiers d) Filters	L2
25	Voltage difference between an active electrode on the scalp with respect to reference electrode at ear lobe or any other part of body is known as _____ recording. a) Monopolar b) Bipolar c) Unipolar d) Nonpolar	L1
26	How is bipolar recording done? a) Omni channel EEG b) Multi channel EEG c) Uni Channel EEG	L4

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	d) Non Channel EEG	
27	EEG signals picked up by surface electrodes are usually small as compared to ECG. a) True b) False	
28	A pattern of electrodes on the head and the channels they are connected to are _____ a) Amplifiers b) Oscilloscope c) Montage d) Wires	L2
29	Where is the reference electrode placed? a) nasal b) cervical c) forehead d) facial	L3
30	EEG machines have notch filter sharply tuned at _____ Hz as to eliminate mains frequency interference. a) 10 b) 30 c) 50 d) 70	L4

