Course/Branch : BE / EEE	**Year / Semester** : III/V	Format No.	NAC/TLP-07a.13
Subject Code :OMD551	**Subject Name** : Basics of Biomedical Instrumentation	Rev. No.	02
Unit No : 1	**Unit Name** : Bio Potential Generation And Electrodes Types	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	Palsied muscles mean _____ a**) paralyzed muscles** b) active muscles c) voluntary muscles d) involuntary muscles	L2
3	The principal ion that is not involved with the phenomena of producing cell potentials is _____ a) sodium b) potassium c) chlorine **d) hydrogen**	L1
4	What is the relatively static membrane potential of quiescent cells called? a) half-cell potential b) action potential c**) resting membrane potential** d) cell potential	L1
5	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
6	Cells depolarize and action potential in generated as soon as a stimulus is applied. a) True **b) False**	L1
7	After a cell is stimulated, a finite period of time is required for the cell to return to its pre-stimulus state. This period is known as _____ a) restoration period **b) refractory period** c) regain period d) regenerative period	L2
8	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**	L1

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9	The basic functional unit of nervous system is _____ a) nerves b) axon **c) neuron** d) dendrite	L1
10	Electrodes make a transfer from the _____ in the tissue to the electronic conduction which is necessary to make measurements. a) electronic conduction **b) ionic conduction** c) electric conduction d) impulsive conduction	L1
11	Surface electrodes damage the living tissues. a) True **b) False**	L1
12	Deep-seated electrodes indicates the electric potential difference arising _____ the living tissues or cells. **a) inside** b) outside c) around d) adjacent	L1
13	Impedance pneumography is a commonly-used technique to monitor a person's _____ **a) respiration rate** b) heart rate c) pulse rate d) skin impedance	L2
14	Electrode paste _____ a) increases contact impedance b) equates contact impedance **c) reduces contact impedance** d) absorbs contact impedance	L1
15	All electrode potentials are measured with respect to which reference electrode? a) hydrogen electrode b) platinum electrode c) calomel electrode **d) hydrogen absorbed on platinum electrode**	L1
16	What is the frequency range of ECG? a) 70-120 Hz **b) 0.05-120 Hz** c) 5-120 Hz d) 12-120 Hz	L2
17	What is the signal amplitude of EEG? **a) 2-200 µV** b) 2-200mV	L1

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	c) 2-2000 µV d) 2-2000mV	
18	Needle electrode is used to measure _____ a) EKG b) EEG c) EOG **d) EMG**	L1
19	Off-set potential is _____ **a) difference in half-cell potentials between two electrodes** b) sum of half-cell potentials between two electrodes c) average of half-cell potentials between two electrodes d) complement of half-cell potentials between two electrodes	L2
20	Which of the following is not preferred for electrode making? a) Ag-AgCl b) Copper **c) Stainless-steel** d) Gold	L2
21	Which of the following statement is false about polarizable electrodes? a) they are made using stainless steel b) used for recording resting ECG c) retain a residual charge when exposed to large pulse of energy **d) can transmit small bioelectric signals even after getting exposed to large pulse of energy**	L2
22	Which electrodes can work even after being induced to large electric discharge such as defibrillation? a) polarizing electrodes b) magnetic electrodes **c) non-polarizing electrodes** d) electrolytic electrodes	L1
23	On increasing the chloride deposit the Ag-AgCl electrode _____ **a) increases the impedance** b) reduces impedance c) has no effect on impedance d) cannot be determined	L1
24	Ag-AgCl electrodes are _____ a) polarized **b) non-polarized** c) partially polarized d) cannot be said	L2
25	Silver -Silver Chloride electrodes are prepared by the process of _____ a) centrifugation b) etching c) manually	L1

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	d) electrolysis	
26	Electrocardiography was invented by _____ **a) Willem Einthoven** b) Robert Koch c) Werner Forssmann d) Gertrude B.Elion	L1
27	MRI stands for _____ a) Mechanical Resonance Imaging **b) Magnetic Resonance Imaging** c) Mutually Related Imaging d) Magnetic Resultant Imaging	L1
28	The interior of the neuron is at a potential of about _____ mV relative to the exterior. **a) -70** b) +70 c) -170 d) +170	L2
29	Tricuspid valve is also called _____ a) Left Atrio-ventricular valve **b) Right Atrio-ventricular valve** c) Pulmonary valve d) Cardiac valve	L1
30	From instruments point of view, heart is a _____ system. a) pneumatic b) electric c) electronic **d) hydraulic**	L1