

MEDICAL ELECTRONICS

ASSIGNMENT 4 - ANSWER KEY

1. In our body, one system communicates with another system by using _____ signal

1 / 1 pt
Auto-graded

Bioelectric

Biomagnetic

BioImpedance

Biomedical ✓

2. The way our body converts food into energy produces _____ signal

1 / 1 pt
Auto-graded

Biomechanical

Biochemical ✓

Bioelectric

Bioimpedance

3. Which of these signals are produced by the heart

1 / 1 pt
Auto-graded

Bioacoustic

Bioimpedance

Biomagnetic

All of the Above ✓

4. The Flow of Blood in the heart produces _____ signals

1 / 1 pt
Auto-graded

- Bioacoustic ✓
- Bioimpedance
- Biochemical
- Biomechanical

5. The flow of air through upper and lower airways and in the lungs generates _____ signal

1 / 1 pt
Auto-graded

- Electric
- Chemical
- Acoustic ✓
- Mechanical

6. The signals generated by muscle cells and nerve cells are called _____

1 / 1 pt
Auto-graded

- Bioelectric ✓
- Biomagnetic
- Biochemical
- Biomechanical

7. When the cell is at rest, the concentration of _____ and _____ ions are more inside than outside

2 / 2 pts
Auto-graded

- Sodium and Potassium
- Potassium and Chloride ✓
- Sodium and Chloride
- Sodium and Calcium

8. The membrane potential when the cell is at a polarized state is _____

1 / 1 pt
Auto-graded

+20mV

-55mV

-60mV ✓

+30mV

9. The voltage-gated sodium channels open only if the membrane potential reaches _____

1 / 1 pt
Auto-graded

+20mV

-55mV ✓

-60mV

+30mV

10. Each cell contains _____ inside the cell and _____ outside the cell

2 / 2 pts
Auto-graded

ICF, ECF ✓

ECF, ICF

Anions, Cations

ions, Proteins

11. ECF contains large amount of _____ ions

1 / 1 pt
Auto-graded

Potassium

Sodium

Potassium & Chloride

Sodium & Chloride ✓

12. ICF contains large amount of _____ ions

1 / 1 pt
Auto-graded

Sodium

Potassium ✓

Calcium

Chloride

13. The membrane of muscle and nerve cell readily permits the entry of _____ ions

1 / 1 pt
Auto-graded

Sodium

Calcium

Potassium

Potassium and Chloride ✓

14. Bioelectric potentials are produced as a _____ activity of certain special types of cells.

1 / 1 pt
Auto-graded

electrical

chemical

electrochemical ✓

mechanical

15. The period during which the cell cannot respond to any stimulus is called _____

1 / 1 pt
Auto-graded

refractory period

absolute refractory period ✓

relative refractory period

active period

16. Which ion does not have leak channel or gated channel

1 / 1 pt
Auto-graded

sodium

chloride ✓

calcium

potassium

17. In an attempt to balance the electric charge, additional _____ ions enter the cell.

1 / 1 pt
Auto-graded

calcium

sodium

potassium ✓

chloride

18. The cell that has been excited is said to be _____ cell

1 / 1 pt
Auto-graded

active

excited

polarized

depolarized ✓

19. Sodium pumping action is responsible for maintaining _____

1 / 1 pt
Auto-graded

Negative ions outside

Potassium ions inside

resting potential ✓

action potential

20. The magnitude of action potential depends upon the concentration of _____ ions in ECF and ICF

1 / 1 pt
Auto-graded

- sodium ✓
- potassium
- Both sodium and potassium
- none

21. The process of changing from resting potential to action potential is called as _____

1 / 1 pt
Auto-graded

- Repolarisation
- Depolarisation ✓
- Polarisation
- Polarised state

22. The magnitude of Resting potential is mainly due to the concentration of _____ ions in ICF and ECF

1 / 1 pt
Auto-graded

- potassium ✓
- sodium
- Both
- None

23. During sodium pumping action, _____ ions are pumped out of cell and _____ ions are pumped into the cell.

1 / 1 pt
Auto-graded

- 3 Na⁺, 3K⁺
- 2K⁺, 3 Na⁺
- 3 Na⁺, 2K⁺ ✓
- Na⁺, K⁺

Roll No

24. Section

0 / 0 pts

Auto-graded

A

B

C

D

E

