**Mid Term Assignment (2020)**

**Course Title: Basic Physiology (DT– 2nd) Instructor: Dr. Irfan Ali Khan**

**Multiple Choice Questions Time: 48 hours**

**Class Code. \_\_\_\_\_\_\_\_\_A\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Name/Class Rollno: Owais Anwar. \_15802\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Note:**

* **Attempt all questions from this section. Select the best answer from given choices.**
* **Use Blue / Black Ink only. Do not use red color.**
* **Tick or encircle only one option in each given question.**

It’s an open book Conceptual Assignment paper. Time to Use your brain now.

1. **A short Gap in the myelin sheath around a nerve fiber is called**
2. Dendrite. (c.Node of Ranvier)
3. Axon terminal
4. Node of Ranvier
5. None of these
6. **The maximum amount of carbon dioxide in the human body is transported as**:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. Bicarbonate. (a.Bicarbonate)
8. Carbide
9. Amylase
10. None of the above
11. **The lungs are protected by\_\_\_\_\_\_\_\_\_\_\_**
12. Ribcage (d.All of the above)
13. Sternum
14. Backbone
15. All of the above
16. **The three different cells found in the stomach**

**(d.Chief cells,parietal cells, mucous cells)**

a) Chief cells, renal cells, nephron

b) Renal cells, mucous cells, hepatic cells

c) Nephrons, hepatic cells, parietal cells

d) Chief cells, parietal cells, mucous cells

1. **For action potential to occur,**

**(c.Both A&B)**

1. The stimulus should reach or exceed threshold
2. Na+ influx must exceed K+ efflux
3. Both A & B
4. None of these
5. **During rising phase of action potential,**

**(a.Voltage gated Na+ channels open)**

1. Voltage gated Na+ channels open
2. Voltage gated K+ channels open
3. Voltage gated Na+ channels close
4. Voltage gated K+ channel close

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1. **The movement of an esophagus to help the food down the GI tract \_\_\_\_\_\_\_\_\_\_**

a) Mastication. (c.Peristalses)

b) Emulsification

c) Peristalses

d) Ejection

1. **Simple diffusion is \_\_\_\_\_\_\_\_.**

**(b.Movement of molecules down the Conc. gradient)**

1. Movement of molecules against the conc. gradient
2. Movement of molecules down the conc. gradient
3. Both A & B
4. None of these
5. **97% of Oxygen is carried in blood from lungs is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
6. Bound to Sulphate ion. (b.Bound to Hemoglobin)
7. Bound to Hemoglobin
8. Dissolved in plasma
9. All of these
10. **Intrinsic factor secreted in stomach helps in**

**(Absorption of vitamin B12)**

1. Absorption of vitamin D.
2. Absorption of vitamin K
3. Absorption of vitamin B12
4. Removal of vitamin B12

**Midterm Assignment(2020)**

**Course Title: Basic Physiology (DT- 2nd) Instructor: Dr. Irfan Ali Khan**

**Time: 72 Hours Section 2**

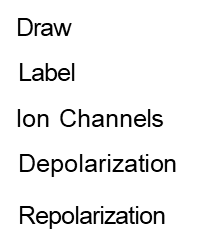
**Name: …Owais Anwar…………………..…………………… Class/Roll.no …15802………………………………….**

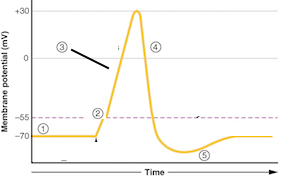
**Note:**

* **Attempt all questions from this section.**
* **Use only Blue / Black Ink other than diagrams**
* **Answer Briefly and to the point, avoid un-necessary details**

1. **Draw and Label the Action Potential in a large myelinated nerve fiber. Which ion channels are involved in its different stages?**

**Key points:**





Ans:

   channel in cell membrane causing action potential

          1.  voltage gated Na+ channels

              .  Activation gates

               . Inactivation gates

2.  voltage gated K+ channels

3  Slow Ca+    Na+  channel

Key point

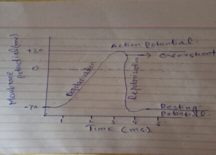
1. **Depolarization**

Depolarization is a change within a cell during which the cell undergoes a shift of in electric charge distribution resulting in less negative charge inside the cell.Depolarization is essential to the function of many cell.

2  **REPOLARIZATION**…

              Repolarization refer to the change in membrane potential that return it to a negative value just the depolarization phase of a action potential which has the membrane potential to positive value

…...**Diagram and label**



1.…Resting potential

2.…Depolarization

3.….Repolarization

4.…ACTION SHOOT

1. **What is the role of oxygen, carbon dioxide and hydrogen ions in control of respiration? Marks 10**

**Ans:** (Role of oxygen)

Oxygen is important to every cell in your body.oxygen through a process called oxidation. chemically changes food and liquid into energy. Its this oxygen fire that contracts our muscle,repair our cells,feeds our brain and even calms our nerve.Not only that but breathing is our body chief cleaning tool.without oxygen your cell cannot make energy,and their metabolism is less effective.without sufficient oxygen,we perform less efficiently.

(Role of carbon dioxide )

In the human body, carbon dioxide is formed from the metabolism of carbohydrates, fats, and amino acids, in a process known as cellular respiration.it regulates

the pH of blood, stimulates breathing, and influences the affinity hemoglobin has for oxygen (O2).

(Role of hydrogen ion)

During cellular respiration in both mitochondria and aerobic prokaryotes, the Electron Transport Chain pumps H+ ions out of the matrix or cytoplasm to

create a H+ concentration gradient. This forces the H+ ions back into the matrix or cytoplasm forcing ATP synthase into action.

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