**Mid Term Assignment (2020)**

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

 **Multiple Choice Questions Time: 48 hours**

**ID (16674) Name (Shahid Ahmad) (Department:) BS Dental 2nd Semester**

**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
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
8. Carbide
9. Amylase
10. None of the above
11. **The lungs are protected by\_\_\_\_\_\_\_\_\_\_\_**
12. Ribcage
13. Sternum
14. Backbone
15. All of the above
16. **The three different cells found in the stomach**

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,**
2. The stimulus should reach or exceed threshold
3. Na+ influx must exceed K+ efflux
4. Both A & B
5. None of these
6. **During rising phase of action potential,**
7. Voltage gated Na+ channels open
8. Voltage gated K+ channels open
9. Voltage gated Na+ channels close
10. Voltage gated K+ channel close

**Stay home, stay Safe**

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

a) Mastication

b) Emulsification

c) Peristalses

d) Ejection

1. **Simple diffusion is \_\_\_\_\_\_\_\_.**
2. Movement of molecules against the conc. gradient
3. Movement of molecules down the conc. gradient
4. Both A & B
5. None of these
6. **97% of Oxygen is carried in blood from lungs is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
7. Bound to Sulphate ion
8. Bound to Hemoglobin
9. Dissolved in plasma
10. All of these
11. **Intrinsic factor secreted in stomach helps in**
12. Absorption of vitamin D
13. Absorption of vitamin K
14. Absorption of vitamin B12
15. Removal of vitamin B12

 **Midterm Assignment(2020)**

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

**Time: 72 Hours Section 2**

**Name: Shahid Ahmad ID 16674**

**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 Ion channel:** A protein that acts as pore in a cell membrane and permits the selective passage are ions (such as potassium ions, sodium ions, and calcium ions)

**Potassium channels** are the most widely distributed type of **ion channel** and found in virtually all living organisms. The form **potassium**-selective pores that span cell membranes. **Potassium channels** are found at most cell types and control a wide variety of cell functions.

**Sodium channel**. **Sodium channels** are integral membrane proteins they form **ion channels**, conducting **sodium ions** (Na+) through a cell's plasma membrane. In excitable cells such are neurons, myocytes, and certain types of glia.

 **Calcium channel** is an **ion channel** which shows selective permeability are **calcium ions**. It is sometimes synonymous with voltage-gated **calcium channel**, although there are also ligand-gated **calcium channels**

**Definition of *depolarization***

**1**The process are [depolarizing](https://www.merriam-webster.com/dictionary/depolarize) something or the state of being depolarized

**2** physiologyloss of the difference in charge between the inside and outside of the [plasma membrane](https://www.merriam-webster.com/dictionary/plasma%20membrane) or a muscle or nerve cell due to a change in permeability and migration of sodium ions to the interior.

**Definition of *repolarization***

Restoration of the difference in charge between are inside and outside of the cell membrane following depolarization.



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

**Ans; Role of oxygen**

**Oxygen** is important the every cell in your body. **Oxygen**, through process called oxidation, chemically changes food as liquid into energy. It's this "**oxygen** fire" that contracts our muscles, repairs our cells.

**Role Carbon dioxide** is one of the most abundant gasses are the atmosphere. **Carbon dioxide** plays at important part in vital plant and animal process, such as photosynthesis and respiration. ... Green plants convert **carbon dioxide** and water into food compounds, such are glucose, and oxygen. This process is called photosynthesis.

Role Of **hydrogen ions** are in liquid that contains water, **hydrogen ions** quickly combine with H2O form hydronium **ions**, or H3O+. ... **Hydrogen ions** also contribute the formation of hydrochloric acid in stomach to digest food, and form a molecule called pepsin, which helps break down food proteins.