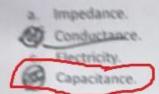
PHYS121 - Quiz #6 Code B

Question #1 [1 mark] - The electrical resistance is defined as



Question #2 [1 mark] - The ratio of the amount of charge transfer (Q) to the potential di



Question #3 [1 mark] - The energy required to separate the electric charges across the membran action of

- a. Action potential.
- b. Passive potential.
- Sodium and Potassium pumping.
- d. Resting Potential.

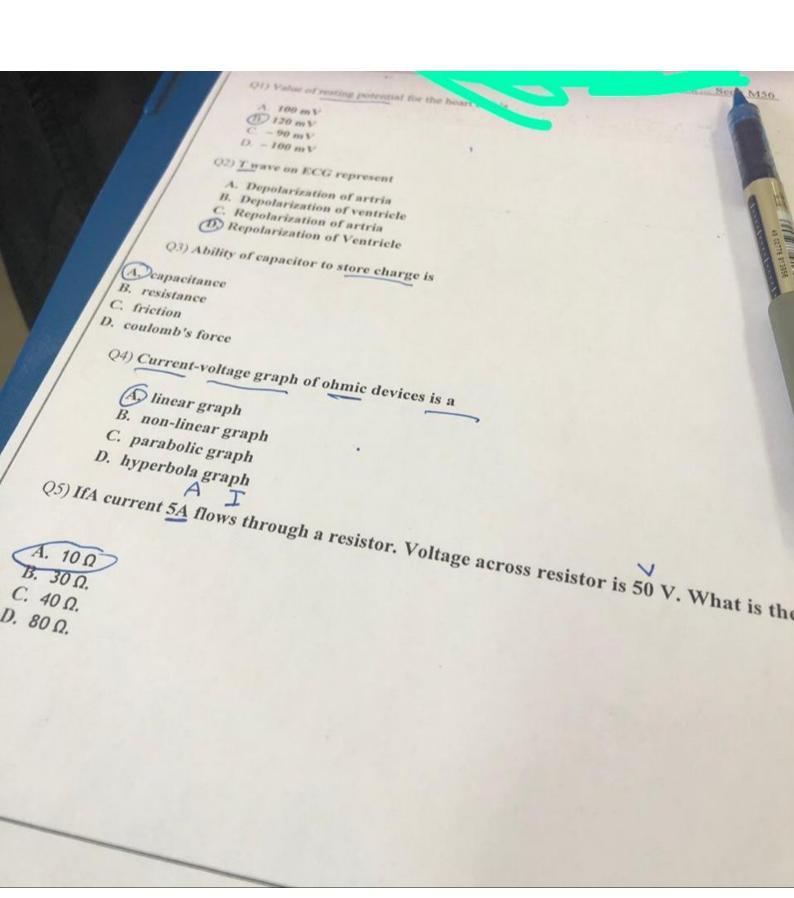
Question #4 [1 mark] - The biological cell acts like a

- (a.) Leaky capacitor.
- Strong capacitor.
- Leaky resistor.
- Strong resistor.

Question #5 [1 mark] - All the following statements describe inactive state of a nerve cell EXC

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- Resting potential difference.
- The potential difference is positive.
- The extracellular fluid is high in sodium (Na*) and low in potassium (K*).
- The intercellular fluid is high in potassium (K*) and low in sodium (Na*).



Q1) The pipe then splits up into FIVE pipes, each of which of has an area equalo the area just before it splits. What is the speed of the water in each pipe now? b) 2 V

- c) V/4
- d) V/6

Q2) Fluid A has a flow rate of 95 ml/s. Fluid B has a flow rate of 65. 3 ml/s in the same Compared to fluid A, fluid B is... b) less viscous

- c) have the same viscosity as A
- d) more dense

(23) In the flow of water through a capillary tube, if the diameter of the tube is ha changes, the flow rate will a) increase by a factor of 9,

- b) increase by a factor of 27,
- c) decrease by a factor of 16,
- d) Increase by a factor of 81.

(24) Which has the greatest effect on the flow of fluid through a pipe? That is, in each of the quantities below, which would cause the greatest change in the

- b) the pressure difference,
- c) the radius of the pipe,
- d) the length of the pipe

5) What pressure drop is needed to deliver solution through a needle wit 95 m length at rate of $10x10^{-5}$ m³/s, (viscosity of the solution $\eta = 2.1 \times 10^{-5}$

- a) $5.2 \times 10^3 \, \text{Pa}$
-) 52.24 Pa
- $71.04 \times 10^{2} Pa$
- 5224×10-3 Pa

- A. sticking
- B. rubbing
- C. oiling
- D. passing AC current

Q2)Two positive charges $Q_1 = 20$ C and $Q_2 = 2$ C, separated by a diameter of 3 m will proof. $K = 9 \times 10^{-9}$.

 $=9\times10^{9}\frac{20\times2}{3^{2}}=$

- 40 x 10⁹ N
 - B. 60 x 109 N
 - C. 80 x 10⁹ N
- D. 20 x 109 N

Q3) If we have a positive and a negative charge, then force between them is

- A. positive
- P. negative
- C. zero
- D. infinite

Q4)Ability of capacitor to store charge depends upon

- A. area of plates
- B. distance between plates
- C. type of dielectric used
- D. all of above

Q5)QRS wave on ECG represent

- A. Depolarization of artria
- Depolarization of ventricle
- C. Repolarization of artria
- D. Repolarization of Ventricle

Quiz 5.3 Electricity	
neartbeat of less than 60 beats per minute is called	
a. tachycardia	
b. bradycardia	
c. arrhythmia	
d. fibrillation	
2. The SI unit of capacitance is	
(a) Farad	
b. Ampere	
c. Ohm	
d. Volt	
3. To obtain a high value of capacitance, the permittivity of dielectric medium could be:	
a. zero	
b. unity	
c. low	
d. high	of 9.00
4 Suppose that two point charges, each with a charge of +3.00 Coulomb are separated by a dista	= 9.0 × 10°
meter. Determine the magnitude of the electrical force of repulsion between them, Take	7.00
N•m°/C°	
a. 9.0 x 10 ⁹ N	
b. 9.5 X 10 ⁸ N	
c. 8.5 X 10 ⁹ M	
d. 1 X 10 ° N	
25. Ability of capacitor to store charge is measured as its	
a. performance	
b. resistance	
e. capacitance	1
d. durability	1
	1

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