

ZOO 308 Test-2 (Saturday 15th May 2010 at 4 pm-UBlock G)

Select the letter corresponding to the best answer. Only one letter best answers the question.

- (1) Van't Hoff's law is used to calculate the value of (a) diffusion (b) active transport (c) osmotic pressure (d) diffusion potential (e) equilibrium potential
- (2) Carrier-mediated transport are characterized by the following (a) saturation (b) competition (c) stereospecificity (d) a, b, and c are all correct (e) none of the proposals is correct.
- (3) Ion channels are (a) Peripheral proteins (b) integral proteins (c) inactivation proteins (d) activation proteins (e) Phospholipids
- (4) Voltage-gated ion channels are (a) cholesterol (b) Phospholipids (c) activated by changes in membrane potential (d) activated by ACh (e) activated by catecholamines
- (5) Ligand-gated ion channels are activated by (a) hormones (b) second messenger (c) neurotransmitters (d) a, b, and c are all incorrect (e) a, b, and c, are all correct
- (6) Nernst equation is used to calculate the value of (a) osmotic pressure (b) Rate of Osmosis (c) equilibrium potential of a given ion across a cell membrane (d) rate of simple diffusion (e) none of the above
- (7) The value of equilibrium potential in the nerve and muscle cells for sodium ion is (a) +65mV (b) +120 mV (c) -65mV (d) -85mV (e) +85mV
- (8) The value of equilibrium potential in the nerve and muscle cells for potassium ion is (a) +65mV (b) +120 mV (c) -65mV (d) -85mV (e) +85mV
- (9) The value of equilibrium potential in the nerve and muscle cells for calcium ion is (a) +65mV (b) +120 mV (c) -65mV (d) -85mV (e) +85mV
- (10) The value of the resting membrane potential for a nerve fiber is (a) +70mV (b) -70mV (c) +85mV (d) -85mV (e) +120 mV
- (11) Which ion is responsible for the generation of the resting membrane potential? (a) Na⁺ (b) K⁺ (c) Cl⁻ (d) Ca²⁺ (e) Mg²⁺
- (12) Which ion is responsible for depolarization during an action potential? (a) Na⁺ (b) K⁺ (c) Cl⁻ (d) Ca²⁺ (e) Mg²⁺
- (13) Which ion is responsible for repolarization during an action potential? (a) Na⁺ (b) K⁺ (c) Cl⁻ (d) Ca²⁺ (e) Mg²⁺
- (14) The speed of the conduction velocity is dependent on the following two factors of the nerve cell (a) myelination (b) decrease fiber size (c) increase fiber size (d) demyelination (e) a, and c are correct
- (15) Synapses can be arranged in two ways (a) one-to-one (b) one-to-many (c) many-to-one (d) a, and C are correct (e) all are correct
- (16) Excitatory post synaptic potential the post synaptic cell membrane (a) mobilize (b) repolarize (c) depolarize (d) hyperpolarize (e) threshold
- (17) Inhibitory post synaptic potential the post synaptic cell membrane (a) mobilize (b) repolarize (c) depolarize (d) hyperpolarize (e) threshold
- (18) Summation at the synapsis can either be (a) spatial or intermediate (b) Temporal or intermediate (c) spatial or temporal (d) temporal or threshold (e) none of the above
- (19) Schizophrenics are individuals with amounts of dopamine (a) too little (b) just enough (c) too much (d) perfect (e) imperfect
- (20) Patients with Parkinson's disease have..... amounts of dopamine (a) too little (b) just enough (c) too much (d) perfect (e) imperfect
- (21) The following are the functions of endorphins EXCEPT (a) euphoria (b) suppress pain sensation (c) cause pain (d) regulate response to stress (e) function like endogenous opitates.
- (22) A sacromere runs from (a) M-line to M-line (b) Z-disk to Z-disk (c) Thin filament to Thin filament (d) Thick filament to Thck filament (e) none of the above
- (23) Thick filaments are present in (a) I-band (b) (c) T-band (c) Z-band (d) A-band (e) Z-band
- (24) Thick filaments are anchored at (a) I-band (b) (c) T-band (c) Z-band (d) A-band (e) Z-line
- (25) Troponin T binds (a) actin (b) myosin (c) tropomyosin (d) Ca²⁺ (e) ATP
- (26) T-tubules are located at the junctions of (a) myosin and actin (b) A-bands and I-bands (c) M-line and Z-lines (d) actin and tropomyosin (e) none of the above
- (27) T-tubules contain a voltage sensitive protein called (a) G-protein (b) cholinergic protein (c) adrenergic protein (d) muscarinic protein (e) dihydropyridine receptor
- (28) Sarcoplasmic reticulum membrane contains (a) Na⁺-K⁺ pump (b) Ca²⁺-ATPase (c) I⁻-pump (d) Cl⁻ pump (e) glucose cotransport.
- (29) Sarcoplasmic reticulum contains Ca²⁺ release channels called (a) ryanodine receptor (b) calsequestrin (c) cisternae (d) T-tubules (e) troponin
- (30) Smooth muscle has no (a) Ca²⁺ (b) myosin (c) troponin (d) thick filament (e) none of the above.

Good Luck

.....