

**1. If you want to prepare isotonic solution of  $\text{Na}_2\text{SO}_3$ , which concentration would be the best :**

- A. 200 mOsm
- B. 300 mOsm
- C. 150 mOsm
- D. 500 mOsm
- E. 100 mOsm

**2. One of the following is true about positive feedback :**

- A. If an action decrease the response will increase
- B. opening  $\text{Na}^+$  channels is an example of positive feedback
- C. keeping the arterial blood pressure in a normal range is an example of positive feedback

**3. In the SA nodal action potential , which phase should be faster to cause tachycardia ?**

- A. phase 0
- B. phase 1
- C. phase 2
- D. phase 3
- E. phase 4

**4. In the action potential for the SA node , in which phase the number of positive charge entering is more than the number of positive charge leaving :**

- A. phase 0
- B. phase 1
- C. phase 2
- D. phase 3
- E. phase 4

**5. During the action potential for SA nodal cell in the heart , the permeability change for :**

- A.  $\text{Na}^+$
- B.  $\text{Na}^+$  ,  $\text{Ca}^{++}$
- C.  $\text{Na}^+$  ,  $\text{Ca}^{++}$  and  $\text{K}^+$
- D.  $\text{Na}^+$  ,  $\text{K}^+$
- E.  $\text{Na}^+$  ,  $\text{Cl}^-$

**6. About Schizophrenia ,which one is true :**

- A. caused by dopamine increase
- B. related to chromosome 11
- C. has no treatment
- D. the patient suffer hallucination

**7. After the action potential happen :**

- A.  $[\text{K}^+]$  increase 1% in the extracellular fluid
- B.  $[\text{K}^+]$  decrease 1% in the intracellular fluid
- C.  $[\text{Na}^+]$  increase 1% in the intracellular fluid
- D. both  $[\text{Na}^+]$  and  $[\text{K}^+]$  changes won't be more than 1%
- E.  $[\text{Ca}^{++}]$  increase 1% in the extracellular fluid

**8. About the body fluids , intracellular share with extracellular :**

- A. number of cations
- B. concentration of protons
- C. osmolarity
- D. volume of the body

**9. The highest permeability through a biological membrane is :**

- A. albumin
- B. Na<sup>+</sup>
- C. Glucose
- D. O<sub>2</sub>
- E. CO<sub>2</sub>

**10. Which of the following affects the " colloid osmotic pressure " :**

- A. Na<sup>+</sup>
- B. albumin
- C. Glucose

**11. about Saturday night syndrome , all the following are true except :**

- A. the patient would have wrist drop
- B. someone with stabs in the brachial plexus may have it
- C. multi peak CAMP
- D. normal CAMP
- E. A person could suffer from this if he uses crutches

**12. One of the following does not happen when you are stressed :**

- A. activated hypothalamus
- B. increase blood pressure
- C. increase the heart rate
- D. increase glucose in the blood
- E. increase the gastric secretion

**13. The enzyme that break down norepinephrine in the tissue :**

- A. Catechol -O- methyl transferase
- B. monoamine oxidase
- C. acetylcholine esterase
- D. amphetamine
- E. botox

**14. The glutamate receptors can bind to all of the following except :**

- A. glycine
- B. magnesium
- C. GABA
- D. zinc
- E. glutamate

**15. All the following are caused by vagotomy except :**

- A. decrease the motility and secretion
- B. increase the heart rate
- C. constipation and slow digestion
- D. decrease the heart rate

**16. All the following are used to treat axillary hyperhidrosis except :**

- A. botox injection
- B. hyponosis
- C. cholinergic drug
- D. endoscopic thoracic sympsectomy
- E. ant perspiration

**17. CGMP dependent protein kinase convert :**

- A. ATP to CAMP
- B. CGMP to GTP
- C. CAMP to GTP
- D. GTP to CAMP
- E. GTP to CGMP

**18. One of the following has a receptor on the cell membrane :**

- A. cortisol
- B. vitamin D
- C. Insulin
- D. thyroid
- E. NO

**19. Calcium – calmodulin is :**

- A. hormone
- B. Ca binding protein

**20. The IP3 function is :**

- A. activate phospholipase C
- B. activate protein kinase C to phosphorylate protein
- C. binds to receptor on ER to release  $Ca^{++}$
- D. stimulate G-protein

**21. Which of the following is used to suppress pain :**

- A. norepinephrine
- B. enkephaline
- C. NO
- D. Glutamic acid

**22. One of the following will happens if you use diuretic drug :**

- A. hyper-osmotic , dehydration
- B. hypo-osmotic , dehydration
- C. hypo-osmotic , over hydration

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دعاءنا لكم بالتوفيق ☺..... لجنة سنة أولى ☺

LEJAN