



PHYSIOLOGY



Midterm Exam
Abdullah Qaswal

Physiology Midterm Exam 2014-2015

1-How cholesterol transport across membrane?

2-where oxidative phosphorylation happens? ---→ Mitochondria

3-what is the most driving force for Cl^- ?

4-the substance which transport phosphate from ATP to proteins is called.....

5- if we dissolve 120 mmol/liter water, which of the following is a hypertonic solution:

*NaCl

*glu

* CaCl_2

*none

، الجواب CaCl_2

6- The highest conductance of Cl^- during.....

7-all of the following are means of active transport except for 1) Ca^{2+} exchanger

Na⁺ K⁺ pump

Ca^{2+} pump

osmosis

vesicular transport

8- The highest rate of diffusion is when:

The answer:

Higher permeability /higher concentration gradient /higher diffusion coefficient

9-The vesicular transport is used for?!Amino acids, long peptide, dimer carbohydrate

10-The enzyme that do phosphorylation is usually called?

11-Match the statements with functions of Golgi: --→ Sorting and packaging

12-The plateau is because of: influx of Ca^{2+}

13-All of the following is true about Na⁺ -K⁺ pump except?

14-الانسولين كان في سؤال عن ترتيب الاحداث في- insulin receptor

15-what is the location of the receptors of hydrophobic and hydrophilic hormones.

16-d question about determining the first messenger and the second and the effector....

17-what causes depolarization -)) sodium influx

18-the main mechanism in which the cell can extrude calcium ions

19-To accomplish the highest negative potential in a membrane...

El choices:

high activity of k/Na pump
Low conductance for Na
High conductance for K
Low conductance for. K
High conductance for k

20-The membrane potential is mainly by:

21-the enzyme which transfer phosphate group from ATP to proteins, (or phosphorylate proteins ... I can't remember exactly) >>>> protein kinase

22-There was a question about the result of up regulation: I answered it gene transcription for the sig attached to receptor increases

23-question about definition of counter transport...and I think that the answer is using ATP molecules to create Na concentration gradient

24-Glucagon binds to G-protein coupled receptor adenylyl cyclase will be activated and cAMP is formed. What is (1) transducer (2) I think first messenger (2) second messenger (3) effector

25-What happens in absolute refractory period?

26-hydrophobic hormones have _____ (intracellular receptors) hydrophilic hormones have _____ (transmembrane receptors)

27-Steroids hormones vs peptide hormones (which is slow which is fast) I think steroid is slow because the test specifically mentioned that steroid will take part in protein synthesis

28-الاستثانة كان عن ال- action potential

29-glucogen and epinephrine binds to a receptor and cause the glycogen breakdown so epinephrine and glycogen must be:

- 1) bind to the same receptor and have similar structure
- 2) bind to a different receptor but with different functions

I can't remember the other options

-30there was another question on what increases or induces (I can't remember) the return of Ca^{++} to the ER

- 1) Ca/Na exchanger
- 2) high activity of k channels
- 3) activation of phospholipase C
- 4) more than one of the above

31- what best describe the action potential

(a question with phrases that are numbered 1 2 3 4

1 during firing phase high na diffusion 2 repolarization can occur due to k activity

3 in overshoot there is a membrane has more negativity than the resting
the action that happen through firing stage are ATP dependant.

32- what is the order if events that occur when a water soluble bind to a receptor

1)the receptor interacts with g protein

2)the hormone binds to a receptor

3)the alpha subunit disassociate

and effect an effector enzyme

I can't remember the rest

33-an inhibitor for GTP

might affect the action of

-G protein coupled receptor

34- What best describe the highest Amount of simple diffusion

- high diffusion coefficient

-low diffusion co

- increased concentration gradient

-decreased concentration gradient

-increased membrane thickness

they were numbered and the options included them

35- Calmodulin is a

ca binding protein

36- A cell which is recognized for steroid hormone by presence of:

Answer>> cytoplasmic receptors

37- About secondary active transport, what is the wrong?

Answer>>> it is dependent on concentration gradient

38- at resting membrane potential:

A. driving force for Na^+ is higher than driving force for K^+

B. driving force for K^+ is higher than driving force for Na^+

Answer>>a

39- about Na-K pump:

Answer>>> it is primary active transport

40- Question about the second messenger pathway which is related to release Ca^{+2} ions from its store:

Answer>>> phospholipase C, IP_3 , Ca^{+2}