



Physiology

= **Last Year** =
Exam

2011



مع تمنياتنا لكم بالتوفيق

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**Jordan University Of Science &
Technology**

Physiology - First Exam

2011

1. Extracellular fluid (ECF) contains up to 10,000 times more calcium than intracellular fluid (INF), and yet all cells continue to pump out even more calcium .. they could only do this by means of :

A. Active transport .

2. Which of the following body systems is not directed entirely toward maintaining homeostasis :

A. All of these answers

3. Which sequence represents the correct hierarchy of biological organization :

A. Cell-tissue-organ-system-organism .

4. The internal environment :

A. Is in direct contact with the body's cells and consists of extracellular fluid .

5. Which of the following statements concerning negative feedback is incorrect :

A. With negative feedback , a control system's input and output continue to enhance each other .

6. Sweating initiated in responses to a rise in body temperature that occurs on exposure to a hot environment evaporation of the sweat cools the body . if

environmental temperature rise 17 and the gain is 33, so body temperature will be :

A. Normal +0.5 .

7. If two control systems , have gain of 4 and 3 respectively then which of the following is correct :

A. First one correction is more than the second .

8. Extrusion of big materials to the exterior of the cell through the plasma membrane is called :

A. Exocytosis .

9. The universal energy currency in cells is :

A. ATP .

10. Which of the following is not a function of membrane proteins :

A. They determine the fluidity of the membrane .

11. The phospholipids within the plasma membrane :

A. Contains more protein than cholesterol .

12. Receptor sites on the outer surface of plasma membrane are :

A. Glycoproteins .

13. A man drinks 2L of hypertonic fluid these two liters will cause :

A. His intracellular and extra cellular fluid osmolarity will be greater .

- and there Q " A man driank a 2 liter of hypotonic fluid these two liters will cause " .

14. After injection 100 micro liter of radioactive labeled albumin with 9 million CPM (unit for radioactivity) , the activity become, after distribution inside the body, 300 CPM what is volume of blood if the Hematocrit is 50% :

A. 6 liters .

15. Ingestion of 1 liter isotonic saline (300 mOsm/l). If plasma osmolarity is 300 mOsm/l and volume ECF= 10 L and ICF = 30 L. Calculate the end result of volume and osmolarity of ECF and ICF :

A. His ECF and ICF osmolarity will be 300mOsm/l, and ECF volume 11 L

16. Variation in percent body water among individuals is primarily due to differences in :

A. Amount of adipose tissue .

17. The largest percentage of water is located in what " compartment"?

A. Interacellular fluids .

18. The component that constitutes the largest percentage of body weight is :

A. H₂O .

19. Select the transcellular fluid that server as shock absorber in the joints :

A. Synovial fluid .

20. What is the Interstitial fluid :

A. Is a solution that bathes and surrounds the cells of multicellular animals.

21. The major source of water loss from the body, under normal condition, is :

A. Urine .

22. When water is lost from the ECF but electrolytes are retained :

A. Osmosis moves water from the ICF to the ECF .

23. The primary electrolyte in the extracellular fluid is :

A. Sodium ion .

24. The ion in greatest concentration within the cytoplasm is :

A. Potassium ion .

25. The unequal distribution of sodium and potassium between the ICF and ECF :

A. Result from sodium being pumped out and potassium being pumped into the cells .

26. When the ECF become hypertonic :

A. Moves out of the cells by osmosis .

27. When there is excess Na⁺ in the body :

A. The plasma volume is expanded, and arterial blood pressure is increased . and will cause hyper osmotic over hydration .

28. The primary anion of the ECF is :

A. Chloride .

29. All of the following are causes of extracellular edema EXCEPT :

A. Inhibition of sodium potassium pump .

30. All of the following will occur during water intoxication EXCEPT :

A. Water movement from ICF to ECF.

31. All of the following are causes of intracellular edema EXCEPT :

A. Effect of histamine endothelial layer .

32. Extracellular fluid (ECF) contains up to 14 times more sodium than intracellular fluid (ICF) , and yet all cells continue to pump in even more sodium , they could only do this by means of :

A. Active transport

33. Which of the following system(s) is directed entirely toward maintaining homeostasis :

A. Renal system .

34. Sweating is initiated in response to a rise in body temperature that occurs on exposure to a hot environment , Evaporation of the sweat cools the body . if environmental temperature rise 34 degree , and the gain is 33 , so body temperature will be :

A. Normal +1

35. Intrusion of big materials to the exterior of the cell through the plasma membrane is called

A. Endocytosis .

36. Which of the following is a function of membrane cholesterol :

A. They control the fluidity of the membrane .

37. If two control systems , have gain of 3 and 4 respectively the which of the following is correct :

A. Second one correction is more than first .

38. Which of the following is a function of membrane cholesterol :

A. They control the fluidity of the membrane

39. After injection of 100 micro liter of radioactive labeled albumin with 6 million CPM (unit for radioactivity) , the activity became , after distribution inside the body 300 CPM , what is the volume of blood if the Hematocrit is 50% :

A. 4 liters

40. Ingestion of 2 liter isotonic saline (300mOsm/L) . if plasma osmolarity is 300 mOsm /L and volume of ECF=10 L and ICF=30 L . calculate the end result of volume and osmolarity of ECF and ICF :

A. His ECF , and ICF osmolarity will be 300 mOsm/L , and ECF volume is 12 L.

41. Select the transcellular fluid that serves as lubricator for the heart :

A. Pericardial .

42. When water is lost from the ECF but electrolytes are retained :

A. The osmolarity of the ECF after equilibrium is less than after water loss .

قدر الشعوب إذا رأيت وقضائها حريرة تدمي يد الجراد
وإذا سرت في الأرض غصه ناسها جادت بما استعصى على الإيجاد