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ACADEMY

ከHIGH SCHOOL እስከ CAMPUS
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About us

ቀሰም Academy ከHigh school እስከ campus ለሚማሩ ተማሪዎች፣ ቲቶሪያዎች፣ ጠቃሚ የንባብ ስልቶችን፣ soft copy የሆኑ ኢጋዥ የንባብ ማቴሪያዎችን፣ ትምህርታዊ መረጃዎችን እና አነቃቂ መልዕክቶችም በማዘጋጀት ለተማሪዎች ንቃት የሚተጋ ቻናል ነው።።

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questions

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BIOLOGY GRADE-11 UNIT-4 BY QESEM ACADEMY.

1. If a red blood cell (RBC is placed in a solution that has a greater concentration than that
   A. the rbc will plasmolysis
   B. the rbc will turgid
   C. there will be a net movement of water out of the rbc into the solution
   D. there will be no net movement of water out of the rbc

2. Osmosis involves the movement of:
   A. water molecules through a membrane from a region of higher concentration of water molecules to a region of lower water molecule concentration.
   B. solute particles from a region of higher solution concentration to a region of lower solution concentration.
   C. water molecules from a region of lower concentration of water to a region of higher water molecule concentration.
   D. solute particles through a membrane from a region of lower solute concentration to a region of higher solute concentration .

3. Which of the following molecules cannot pass through the plasma membrane?
   A. water molecules
   B. non-polar molecules
   C. amino acid based hormones
   D. fat-soluble molecules

4. The process of “diffusion” through a membrane may be described by which of the
   A. the movement of ions and molecules away from regions where they are in high concentration towards regions where they are in lower concentration.
   B. the use of energy from ATP to move ions and small molecules into regions where they are in lower concentration.
   C. the plasma membrane engulfs the substance and moves it through the membrane
   D. the use of energy from ATP to move water molecules against their concentration gradient .

5. The plasma membrane of a cell contains molecules that have a hydrophobic end and a hydrophilic end is called
   A. phospholipids
   B. cholesterol
   C. integral proteins
   D. glycoproteins

6. Which of the following is NOT part of the plasma membrane of a cell?
   A. integral proteins
   B. glycoproteins
   C. plasma proteins
   D. peripheral proteins

7. What is the function of phospholipids in the plasma membrane?
   A. to maintain the intracellular fluid at a similar composition to that of the interstitial fluid.
   B. to form channels to selectively allow passage of small molecules
   C. to act as receptors for signaling chemicals
   D. to present a barrier to the passage of water-soluble molecules

8. Which one of the following is true about hydrophilic region of phospholipid molecule?
   A. Water hating
   B. Hydrocarbon tail part
   C. Phosphate head part
   D. Insoluble in water

9. Which one of the following is true about events in cell biology
   A. Jansen--------- builds the first transmission electron microscope
   B. Brown---------- describes „cells" in cork
   C. Leeuwenhoek-------discovers protozoa
   D. Kolliker---------- propose the double-helix structure of DNA

10. Cube A has a side measuring 3 mm Cube B has a side measuring 12 mm. The surface-areato-volume ratio of cube A when compared to cube B. is:
   A. Two times bigger
   B. Two times smaller
   C. Four times smaller
   D. Four times bigger

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11. One of the following is true about Prokaryotic cells
   A. DNA is a continuous loop not associated with protein
   B. DNA is linear associated with histone proteins
   C. Cell wall always present & made from cellulose
   D. Ribosomes is present but larger than eukaryotic cells

12. Which one of the following is common for Davson-Danielli and fluid mosaic model of
   A. Sandwich arrangement
   B. Static arrangement
   C. Phospholipid bilayer
   D. Flexible arrangement

13. From the following, which one has inverse relationship with the rate of diffusion?
   A. Surface area of the membrane
   B. Diffusion distance
   C. Temperature
   D. Concentration gradient

14. Which of the following does not use energy in the form of ATP?
   A. Active transport
   B. Endocytosis
   C. Facilitated diffusion
   D. Phagocytosis

15. Membrane-bound organelles include:
   A. Ribosomes and mitochondria
   B. Mitochondria and chloroplasts
   C. Chloroplasts and peroxisomes
   D. Peroxisomes and nuclei

16. If red blood cells are immersed in a hypotonic solution, they will:
   A. Take in water by osmosis, swell and become turgid
   B. Lose water by osmosis and shrink
   C. Lose water by osmosis and burst
   D. Take in water by osmosis, swell and burst

17. Which one of the following transport system is used as a mode of feeding

A. Pinocytosis
B. Receptor-mediated transport
C. Phagocytosis
D. Endocytosis

18. Suppose your teacher allowed you to separate one specific organelle from a sample of animal tissue, you have placed a sample of tissue in cold, isotonic buffer solution prior to centrifugation. What is the purpose of buffer solution?
A. To reduce the activity of enzymes that breakdown organelles
B. To prevent water moving into organelles via osmosis
C. To prevent organelle proteins from becoming denatured
D. To prevent water moving into cell

19. Which one of the following is found in both prokaryotic and eukaryotic cells?
A. chromosome associated with histone
B. Nuclear membrane
C. Ribosome
D. Mitochondrion

20. In the development of cell biology, which event arises prior to others?
A. The double-helix structure of DNA
B. The discovery of cell
C. The cell theory
D. Invention of microscope

21. What term is used to describe the movement of dissolved particles along (or down) their concentration gradient?
A. endocytosis
B. active transport
C. osmosis
D. diffusion

22. Why does the plasma membrane of a cell present a barrier to the movement of
A. There are no channels in the membrane for the passage of electrolytes
B. Electrolytes are not soluble in the lipid of the membrane
C. Electrolytes are too large to pass through membrane channels

D. Membrane proteins electrically repel charged particles

23. The process of “active transport” through a membrane may be described by which of the
A. the movement of ions and small molecules away from regions where they are in high concentration.
B. the use of energy from ATP to move ions and small molecules into regions where they are in lower concentration.
C. the plasma membrane engulfs the substance and moves it through the membrane
D. the use of energy from ATP to move ions and small molecules against their concentration gradient.

24. Facilitated diffusion refers to the process of
A. movement along a concentration gradient assisted by protein carrier molecules
B. movement of ions and molecules along a concentration gradient
C. transport of molecules and ions against their concentration gradient
D. water movement through a semi-permeable membrane

25. Which statement about the plasma membrane is INCORRECT?
A. It is selectively permeable
B. It is composed of two layers of glycoprotein molecules
C. It contains receptors for specific signaling molecules
D. none

26. Facilitated diffusion through a membrane involves which of the following scenarios?
A. the diffusion of water through a selectively permeable membrane along its concentration gradient.
B. the movement of a molecule against its concentration gradient with the
C. the plasma membrane surrounding (engulfing) the molecule & the molecule moving into the cell.
D. a molecule binding to a receptor which moves the molecule through the plasma membrane

27. What is the major component of the plasma membrane of a cell?
A. phospholipid
B. glycolipid
C. integral protein

D. cholesterol

28. Osmosis may be defined as which of the following?
A. The diffusion of water molecules across a semi-permeable membrane from the concentration.
B. The movement of water molecules across a semi-permeable membrane from the solution of higher concentration into the solution of lower concentration.
C. The diffusion of solute particles across a semi-permeable membrane from the solution of higher concentration into the solution of lower concentration.
D. The movement of water molecules across a semi-permeable membrane from the solution of lower concentration into the solution of higher concentration.

29. What is the name given to the type of transport where glucose or an amino acid binds to a
A. facilitated diffusion
B. bulk transport
C. secondary active transport
D. active transport

30. Facilitated diffusion differs from active transport because facilitated diffusion:
A. requires energy from ATP
B. moves molecules from where they are in lower concentration to higher concentration
C. moves molecules from where they are in higher concentration to lower concentration
D. involves ions & molecules that pass-through membrane channels

31. One of the functions of integral proteins in cell membranes is to:
A. maintain the rigid structure of the cell
B. support mechanically the phospholipids
C. interact with the cytoplasm
D. form channels for transport functions

32. Which of the following is NOT a component of the cell plasma membrane?
A. cholesterol

B. proteins
C. microfillaments
D. phospholipid

33. Which of the following is a function of membrane proteins?
A. to process lipids and proteins for secretion through the plasma membrane
B. to act as receptors for hormones
C. to synthesise proteins from amino acids
D. to act as a cytoskeleton to support and shape the cell

34. What are lysosomes, centrosomes and ribosomes example of?
A. stem cells
B. organelles within a cell
C. sensory receptors in the dermis
D. exocrine glands

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ANSWER

1,C	**2,A**	**3,C**	**4,A**	**5,A**	**6,C**	**7,D**	**8,C**	**9,C**	**10,D**
11,A	**12,C**	**13,B**	**14,C**	**15,B**	**16,D**	**17,C**	**18,C**	**19,C**	**20,D**
21,D	**22,B**	**23,D**	**24,A**	**25,B**	**26,D**	**27,A**	**28,D**	**29,A**	**30,C**
31,D	**32,C**	**33,B**	**34,B**						

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