PRACTICE QUESTIONS

Chapter 4

Question 1

The plasma (cell) membrane proteins can function in:

A. cell-cell recognition and communication

B. transport

C. enzyme activity

D. all the above are correct

Question 2

Which of the following molecules crosses (passes) plasma (cell) membrane easily?

A. Amino acid

B. glucose

C. oxygen (O_2)

D. cellulose

Question 3

Water moves across cell membrane by a process called:

A. active transport

B. facilitated transport

C. Pinocytosis

D. osmosis

Question 4

In plants water is absorbed by the root hairs by a process called:

A. Respiration

B. Photosynthesis

C. Osmosis

D. Diffusion

Question 5

Facilitated diffusion of molecules by the aquaporin is a type of ____.

A. active transport

B. cell respiration

C. passive transport

D. none of the above

Question 6

Process of Endocytosis can occur through _____.

A. Phagocytosis

B. Pinocytosis

C. receptor-mediated endocytosis

D. all of the above

Question 7

Exocytosis is a mechanism used by the cell to _____.

A. import molecules useful to the cell

B. Generation of ATP

C. Recycle the damaged organelles

D. Export molecules out of the cell

Question 8

Large solid particles enter the cell by a process called:

A. Exocytosis

B. Phagocytosis

C. Pinocytosis

D. Hydrolysis

Question 9

The cell's energy "currency" is:

A. ATP

B. CTP

C. Kcal

D. GTP

Question 10

Pinocytosis is a type of _____.

A.Endocytosis

B. Exocytosis

C. Simple diffusion

D. Facilitated diffusion

Question 11

Energy of movement is referred to as _____ energy.

A. Potential

B. heat or thermal

C. Kinetic

D. electrical

Question 12

The study of energy relationships and their exchanges is called _____.

A.Photosynthesis

B. Metabolism

C. Thermodynamics

D. Oxidation

Question 13

The _____ law of thermodynamics states that energy is constant, can neither be created nor destroyed.

A. First

B. Second

C. Third

D. Fourth

Adenosine Triphosphate (ATP) is

A. an enzyme

B. a protein

C. a hormone

D. a molecule with high energy for cellular work

Which of the following statements about enzymes is not true?

A. Enzymes are catalysts.

B. Almost all enzymes are proteins.

C. Enzymes operate most efficiently at optimum pH.

D. Enzymes are destroyed during chemical reactions.

Question 16

Which one of the following statement is TRUE about diffusion?

A. It involves movement of solvent molecules

B. It occurs when particles move from a region of lower concentration to a region of higher concentration

C. It does not require a semi-permeable membrane

D. All of the above

Question 17

The Cell membrane phospholipids have a _____head and two ____tails.

A. **Hydrophilic& hydrophobic**

B. **Hydrophobic& hydrophilic**

C. **Hydrophilic& hydrophilic**

D. **Hydrophobic& hydrophobic**

Question 18

Most enzymes are:

A. nucleic acids

B. proteins

C. lipids

D. carbohydrates

Question 19

_____ is a biological process, which uses ATP to pump molecules AGAINST/UP the concentration gradient.

A. Passive Transport

B. Active Transport

C. Osmosis

D. Endocytosis

Question 20

Enzymes catalyze chemical reaction by:

A. lowering (decreasing) activation energy.

B. increasing activation energy

C. increasing thermal (heat) energy

D. increasing diffusion of reacting molecules

Question 21

_____ is the net movement of molecules from a region of higher concentration to a region of lower concentration.

A. Passive transport

B. Osmosis

C. Active transport

D. Pinocytosis

Question 22

Which statement is CORRECT about osmosis?

A. It occurs only across a semi-permeable membrane

B. Water travels from a solution of lower solute concentration to a solution of higher solute concentration

C. A+b

D. None of the above

Question 23

To block the enzyme action, the enzyme's active site interacts with:

A. the enzyme's substrate

B. competitive inhibitors

C. non-competitive inhibitor

D. All of them

Question 24

ATP is composed of adenine (a nitrogenous base), ribose (a five-carbon sugar), and _____.

A. Three phosphate groups

B. Two phosphate groups

C. One phosphate groups

D. None of the above

Question 25

What is the energy?

A. The amount of food eaten

B. The capacity to perform work

C. Movement

D. The capacity to produce heat

Question 26

Which of the following describes the fluid-mosaic model of the plasma membrane structure?

A. Phospholipid monolayer with embedded proteins

B. Phospholipid bilayer with embedded proteins

C. Phospholipid trilayer with embedded proteins

D. Triglyceride bilayer with embedded proteins

Question 27

Organic compounds required by enzymes are_____.

A. Inhibitors

B. Cofactors

C. Proteins

D. Coenzymes

Question 28

A dye is dissolved in water. The _____ is the solute and the solvent is the _____ molecules and the process is called_____.

A. Water, dye, diffusion

B. Dye, water, osmosis

C. Dye, water, diffusion

D. Water, Dye, diffusion

ANSWERS

1.	D
2.	C
3.	B
4.	C
5.	C
6.	D
7.	D
8.	B
9.	A
10.	A

11.	C
12.	C
13.	A
14.	D
15.	D
16.	C
17.	A
18.	B
19.	B
20.	A

21.	A
22.	C
23.	B
24.	A
25.	B
26.	B
27.	D
28.	C