# QUIZ Time

physiology 2

Corrected by:rahaf alfogaha

لجنة طب الأسنان

# physiology 2

1. What is the primary structure of the cell membrane?
A. Single layer of phospholipids
B. Double layer of proteins
C. Lipid bilayer with embedded proteins
D. Carbohydrate monolayer
Answer: C. Lipid bilayer with embedded proteins
2. Which type of membrane protein spans the entire lipid bilayer?
A. Peripheral proteins
B. Integral (transmembrane) proteins
C. Glycoproteins
D. Glycolipids
Answer: B. Integral (transmembrane) proteins
3. What characteristic differentiates passive transport from active transport across the cell membrane?
A. Passive transport requires energy; active transport does not.
B. Active transport requires energy; passive transport does not.
C. Passive transport moves substances against their concentration gradient; active transport moves substances with their concentration gradient.
D. Active transport moves substances through open channels; passive transport uses carriers.
Answer: B. Active transport requires energy; passive transport does not.
4. Which of the following is an example of passive transport?
A. Sodium-potassium pump
B. Endocytosis
C. Facilitated diffusion
D. Exocytosis
Answer: C. Facilitated diffusion
5. In facilitated diffusion, what is the role of carrier proteins?
A. To provide energy for transport
B. To bind and transport specific molecules across the membrane
C. To create open channels for any molecule to pass
D. To modify the molecules being transported
Answer: B. To bind and transport specific molecules across the membrane
6. Which factor does NOT affect the rate of diffusion across the cell membrane?
A. Concentration gradient
B. Electrical gradient
C. Membrane thickness
D. Presence of ATP
Answer: D. Presence of ATP
7. What is osmosis?
A. Diffusion of solutes from high to low concentration
B. Active transport of water molecules
C. Diffusion of water from low solute concentration to high solute concentration through a semipermeable membrane
D. Movement of water against its concentration gradient
Answer: C. Diffusion of water from low solute concentration to high solute concentration through a semipermeable membrane
8. Which solution has the same osmolality as plasma?
A. Hypertonic solution
B. Hypotonic solution
C. Isotonic solution
D. Supersaturated solution
Answer: C. Isotonic solution
9. What happens to a cell placed in a hypertonic solution?
A. It swells and may burst.
B. It remains unchanged.
C. It shrinks due to water loss.
D. It becomes turgid.
Answer: C. It shrinks due to water loss.
10. Which type of channel is always open and allows ions to pass through the membrane without gating?
A. Voltage-gated channels
B. Ligand-gated channels
C. Leak channels
D. Mechanically-gated channels
Answer: C. Leak channels