Module 05 Quiz: Membranes

Name: ____ ***Date:*** _____

Part A: Multiple Choice (7 points)

Choose the best answer for each question. (1 point each)

1. The fluid mosaic model describes:
2. A) How DNA replicates
3. B) The structure of cell membranes
4. C) Protein synthesis
5. D) Cell division
6. Which type of transport does NOT require energy from the cell?
7. A) Active transport
8. B) Endocytosis
9. C) Passive transport
10. D) Exocytosis
11. A red blood cell placed in pure water will:
12. A) Shrink
13. B) Swell and possibly burst
14. C) Remain unchanged
15. D) Divide
16. Osmosis is specifically the movement of:
17. A) Solutes from high to low concentration
18. B) Water across a semipermeable membrane

19. C) Proteins across the membrane

20. D) Ions using ATP

21. What type of transport uses carrier proteins but no ATP?

22. A) Simple diffusion
23. B) Facilitated diffusion
24. C) Active transport

25. D) Endocytosis

26. The sodium-potassium pump moves:

27. A) Both ions in the same direction
28. B) Sodium out and potassium into the cell
29. C) Water molecules

30. D) Without using ATP

31. A cell placed in a hypertonic solution will:

32. A) Swell
33. B) Shrink
34. C) Stay the same
35. D) Divide

Part B: Free Response (3 points)

Answer each question in complete sentences.

1. (1 point) Explain why the cell membrane is described as "selectively permeable."

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1. (1 point) Compare passive transport and active transport. Include examples of each.

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1. (1 point) A patient receives IV fluids. Explain why it is important that the IV solution is isotonic to blood.