

## Cell Structure & Function Test Review Questions

p. 197-198 # 1-9, 14-19, 21-23, 26, 28

### Reviewing Content

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

### Understanding Content

14. Ribosomes produce proteins.
15. Rough ER makes membranes and proteins that are excreted.
16. The Golgi contains enzymes that attach carbohydrates and lipids to proteins. It “fine tunes” and adjusts cell products.
17. Mitochondria and chloroplasts contain their own DNA.
18. Microfilaments are threadlike structures made of the protein actin. They provide a tough framework that supports the cell. Microtubules are hollow structures made of the protein tubulin. They maintain cell shape.
19. The core of the cell membrane is made up of a lipid bilayer. Protein molecules are embedded in this layer. The proteins form channels and pumps that enable materials to move across the cell membrane.
21. During diffusion, particles tend to move from an area of high concentration to an area of lower concentration. When diffusion is complete, the system has reached equilibrium.
22. Osmosis is the diffusion of water through a selectively permeable membrane. Only water can move by osmosis.
23. An isotonic solution would have the same concentration of solute on both sides of a membrane. The result of placing cells in an isotonic sugar solution would be that the cells would neither shrink nor swell.

### Critical Thinking

26. The diffusing salt particles (i.e. the sodium ions and chloride ions that make up salt) and water molecules will eventually reach equilibrium without a change in the fluid on either side.
28. The blood cells would swell and probably burst.

p. 217 #4 – 7, 16

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|------|------|------|------|
| 4. D | 5. C | 6. A | 7. D |
|------|------|------|------|

16. Carbon dioxide + water → sugars + oxygen

p. 237 # 3, 4, 14

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|------|------|
| 3. B | 4. C |
|------|------|

14.  $6\text{O}_2 + \text{C}_6\text{H}_{12}\text{O}_6 \rightarrow 6\text{CO}_2 + 6\text{H}_2\text{O} + \text{energy}$   
oxygen + glucose → carbon dioxide + water + energy