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CHAPTER 3 – CELL STRUCTURE & FUNCTION

THE CELL

1. Which organelle makes energy (ATP) from food:
   1. Lysosomes
   2. Peroxisomes
   3. Mitochondria
   4. Chloroplasts
2. The light microscope magnifies an object:
   1. 100 times
   2. 1000 times
   3. 10,000 times
   4. 100,000 times
3. The main difference between Eukaryotic and Prokaryotic cell is:
   1. cell membrane
   2. nucleus
   3. cytoplasm
   4. ribosomes
4. Select best statement about the appendages found on the cells:
   1. One or just few long flagella
   2. many short flagella
   3. a long cilium
   4. many long cilia
5. Ribosomes could be attached to which organelle:
   1. Mitochondria
   2. Nucleus
   3. Endoplasmic reticulum (ER)
   4. Golgi apparatus
6. Which structure inside the cytoplasm helps synthesize (make) proteins:
   1. Mitochondria
   2. Nucleus
   3. Smooth ER
   4. Ribosomes
7. Which organelle makes lipids and stores calcium ions:
   1. Mitochondria
   2. Nucleus
   3. Smooth ER
   4. Ribosomes
8. Which organelle receives molecules from ER, process them and send them to different locations:
   1. Golgi Apparatus
   2. Nucleus
   3. Smooth ER
   4. Ribosomes
9. Which organelle contains enzymes for digestion of damaged materials (bacteria, organelles):
   1. Mitochondria
   2. Lysosome
   3. Smooth ER
   4. Ribosome
10. Which of the following is a component of mitochondria?
    1. Stroma
    2. Nuclear envelope
    3. Cristae
    4. Thylakoids
11. Which of the following is a component of chloroplasts?
    1. matrix
    2. Nuclear envelope
    3. Cristae
    4. Thylakoids
12. The endosymbiotic theory explains the origin of:
    1. Nucleus
    2. Mitochondria
    3. Ribosomes
    4. Cytoplasm
13. Which cytoskeleton is made of tubulin:
    1. Actin filaments
    2. Intermediate filaments
    3. Microtubules
    4. None
14. Cilia and flagella are made of:
    1. Actin filaments
    2. Intermediate filaments
    3. Microtubules
    4. None
15. The junctions with role in preventing water leaking are:
    1. Tight junctions
    2. Desmosomes
    3. Gap junctions
    4. Extracellular matrix
16. The junctions found in plants with role in cell communication are:
    1. Tight junctions
    2. Desmosomes
    3. Gap junctions
    4. plasmodesmata
17. Which structure of the cell stores the material genetic of the cell:
    1. Membrane
    2. Cytoplasm
    3. Nucleus
    4. Lysosomes

MEMBRANE TRANSPORT

1. Cell (plasma) membranes are selectively permeable. This means that:
   1. It allows any molecules to pass through
   2. It allows only some molecules to pass through
   3. It doesn’t allow any molecules to pass through
   4. It allows molecules to only enter the cells
2. In a cup of coffee, the water is:
   1. solute
   2. solvent
   3. solution
   4. osmosis
3. A solution with more salt than another is said to be:
   1. Isotonic
   2. Hypotonic
   3. Hypertonic
   4. Osmotic
4. Which statement is correct about passive transport?
   1. Requires energy
   2. Molecules move from low to high concentration
   3. Does not require energy
   4. Molecules move against the concentration gradient
5. Movement of molecules against their concentration gradient is called:
   1. Diffusion
   2. Facilitated diffusion
   3. Osmosis
   4. Active transport
6. Osmosis is:
   1. Active transport
   2. Facilitated transport
   3. Water diffusion
   4. Solute diffusion
7. A salty water fish is submerged in a beaker with tap pure water. What is the direction of osmosis in this situation?
   1. The salt moved out of the fish cells
   2. The water moved out of the fish cells
   3. The water moved in the fish cells
   4. The salt moved in the fish cells
8. A bulky molecule made inside the cell is secreted to the outside of the cell through a process of:
   1. Endocytosis
   2. Phagocytosis
   3. Osmosis
   4. Exocytosis
9. The uptake of a bulky molecule in a very specific manner is called:
   1. Endocytosis
   2. Phagocytosis
   3. Receptor – mediated endocytosis
   4. Exocytosis