



Name: _____

Date: _____ Per: _____

Cells in Action Test

- 1) what diffusion is? Movement of particles from high concentration to low concentration
- 2) what osmosis is? Diffusion of water through a membrane
- 3) why osmosis is important in cells? The movement of water keeps the concentration of other molecules in balance
- 4) how particles that can't go through the semipermeable membrane travel in and out of a cell? They can go through protein channels
- 5) how active transport is different from passive transport? Active transport requires energy (particles move from low concentration to high concentration)
- 6) how the largest particles move in and out of a cell? Endocytosis (enter cell) or exocytosis (exit cell): by enclosing the particle in a membrane, the vesicle is sent to the cell membrane to enter or exit the cell.
- 7) how endocytosis is different from exocytosis? Endocytosis: enters the cell
Exocytosis: exits the cell
- 8) how plants convert the sun's energy? Photosynthesis: the chloroplasts take in energy from the sunlight, water (H₂O) and carbon dioxide (CO₂) to produce glucose (C₆H₁₂O₆) and oxygen (O₂)
- 9) why plants make glucose? To store energy
- 10) which organelle is essential for photosynthesis? Chloroplasts
- 11) what cellular respiration is? Converting glucose and oxygen into ATP (energy that is usable by the cell), water and carbon dioxide
- 12) which organelle is essential for cellular respiration? mitochondria

- 13) what the energy from glucose becomes after cellular respiration? ATP
- 14) how cellular respiration is different from fermentation? Cellular respiration requires oxygen, fermentation does not
- 15) what the cell cycle is? The life cycle of the cell: how they reproduce
- 16) what chromosomes are? Condensed DNA (holds genetic information)
- 17) how prokaryotic cells reproduce? Binary fission: DNA copies, cell splits
- 18) what homologous chromosomes are? Chromosomes with the same structure and sequence of genes
- 19) the three major stages of the cell cycle? Interphase, mitosis, cytokinesis
- 20) what happens in the first stage? Interphase: Cell grows, DNA and organelles are copied
- 21) the four phases of mitosis? And what happens in each? Prophase: DNA condenses into chromosomes, nuclear membrane disappears
Metaphase: chromosomes line up along the middle
Anaphase: spindle fibers pull chromosomes away from each other
Telophase: chromosomes uncoil into DNA, nuclear membrane reappears
- 22) what happens in the last stage of the cell cycle? Cytokinesis: cytoplasm splits and there are two cells
- 23) how the last stage of the cell cycle is different in plants and animals? Plant cells produce a cell plate that becomes a cell wall, animals cells squeeze together and pinch off two cells
- 24) what mitosis is? The process that makes two identical nuclei
- 25) what spindle fibers do? Line up chromosomes in the middle, then pull them apart
- 26) where the vocabulary words are? Vocabulary homework, quizlet
- 27) what pages the test is on? 32-49
- 28) what day your test is? Thursday 3/9/17