

**Directions:** Choose the letter of the correct answer.

1. Which of the following is shared by all cells?
  - a. Plasma membrane
  - b. Cytosol
  - c. Ribosome
  - d. All of the above
2. Instruments that allow us to see and view cells.
  - a. Telescope
  - b. Magnifying Glass
  - c. Microscope
  - d. Eye Glasses
3. This part of the nucleus acts as gates that control substances that enter or exit it.
  - a. Nuclear Membrane
  - b. Nucleoplasm
  - c. Nucleolus
  - d. Nuclear Pores
4. Which part of the eukaryotic cell performs protein synthesis?
  - a. Smooth ER
  - b. Rough ER
  - c. Golgi Apparatus
  - d. Mitochondria
5. Cell organelle that specifically breaks down fatty acids.
  - a. Lysosome
  - b. Peroxisome
  - c. Centriole
  - d. Ribosome
6. Which of the following are considered a cell type?
  - a. Prokaryotic
  - b. Eukaryotic
  - c. All of the above
  - d. None of the above
7. Which organelle is found in plant cells and absent in animal cells?

- a. Nucleus
  - b. Chloroplast
  - c. Cytoskeleton
  - d. Centrosomes
8. The following organelles manufacture, distribute, or break down molecules except?
- a. Plasma Membrane
  - b. Endoplasmic Reticulum
  - c. Golgi apparatus
  - d. Vacuole
9. This part of the prokaryotic cell is primarily used for locomotion.
- a. Nucleoid
  - b. Pili
  - c. Capsule
  - d. Flagella
10. Which organelle in a eukaryotic cell can perform genetic control?
- a. Nucleus
  - b. Cell Wall
  - c. Mitochondria
  - d. Lysosome
11. The cilia of *Paramecium* belong to which cytoskeletal fiber?
- a. Microtubules
  - b. Intermediate Filaments
  - c. Microfilaments
  - d. None of the above
12. This cell junction type is also known as a “communicating junction”.
- a. Tight junction
  - b. Anchoring junction
  - c. Gap junction
  - d. Plasmodesmata
13. A sticky substance between two plant cells that links them together.
- a. Pectin
  - b. Lignin
  - c. Cellulose

- d. Glycoprotein
- 14. This type of fiber that makes up the cytoskeleton is composed of tubulins.
  - a. Microtubules
  - b. Intermediate Filament
  - c. Microfilament
  - d. Extracellular matrix
- 15. What junction type is connected to the cytoplasm through intermediate filaments?
  - a. Tight junction
  - b. Anchoring junction
  - c. Gap junction
  - d. Plasmodesmata
- 16. This passive transport mechanism is a direct result of the innate thermal energy of molecules.
  - a. Diffusion
  - b. Osmosis
  - c. Facilitated Diffusion
  - d. None of the above
- 17. A type of active transport where cells are able to engulf small fluid particles.
  - a. Exocytosis
  - b. Phagocytosis
  - c. Receptor-mediated endocytosis
  - d. Pinocytosis
- 18. The process where animal cells shrivel due to an imbalance in solute concentrations refers to?
  - a. Plasmolysis
  - b. Crenation
  - c. Turgidity
  - d. Tonicity
- 19. This special type of passive transport is exhibited by water molecules on selectively permeable layers.
  - a. Diffusion
  - b. Osmosis
  - c. Facilitated Diffusion

- d. None of the above
20. Which type of protein requires energy to push solutes against a concentration gradient?
- Aquaporins
  - Channels
  - Protein Pumps
  - Carrier Proteins
21. The part of the cell cycle where chromosomes are duplicated is referred to as
- G<sub>1</sub> phase
  - S phase
  - G<sub>2</sub> phase
  - Interphase
22. The structure that contains DNA and all proteins attached to it is called?
- Chromatin
  - Sister chromatid
  - Centromere
  - Chromosome
23. Which of the following is a main stage of the cell cycle?
- G<sub>1</sub> phase
  - S phase
  - G<sub>2</sub> phase
  - Mitotic phase
24. The mode of reproduction of some unicellular organisms where they form a new individual from the division of the original.
- Cell division
  - Cell Cycle
  - Binary fission
  - Mitosis
25. The phase of the cell cycle where it becomes prepared for cell division
- G<sub>1</sub> phase
  - S phase
  - G<sub>2</sub> phase
  - Mitotic phase

26. Structures on sister chromatids where mitotic spindle fibers attach and move them towards the center of the cell.
- Metaphase plate
  - Cleavage furrow
  - Cell plate
  - Kinetochores
27. The chromosomes line up in the middle of the cell at what stage of mitosis?
- Prophase
  - Metaphase
  - Anaphase
  - Telophase
28. This stage is characterized by the nuclear envelope dissolving and microtubules attached to the chromosomes. It can be considered distinct or part of another mitotic stage.
- Prophase
  - Prometaphase
  - Metaphase
  - Anaphase
29. Cytokinesis in animal cells is marked by the appearance of which structure?
- Kinetochores
  - Metaphase plate
  - Cleavage furrow
  - Cell plate
30. The sister chromatids are separated and are pulled opposite each other during which mitotic stage?
- Prophase
  - Metaphase
  - Anaphase
  - Telophase
31. The sex chromosomes in humans are labeled what?
- X and Y
  - 1 and 2
  - I and II

- d. M and F
32. The stage in meiosis where crossing-over takes place.
- Prophase I
  - Metaphase I
  - Anaphase I
  - Telophase I
33. The egg and sperm cells only contain 23 sets of chromosomes; therefore, they are considered?
- Diploid
  - Haploid
  - Autosomes
  - Somatic cells
34. When homologous chromosomes align gene by gene, which structure is formed?
- Gene
  - Locus
  - Tetrad
  - Autosomes
35. Genes are located in which part of the chromosome?
- Autosome
  - Tetrad
  - Sister Chromosomes
  - Locus