

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
- G₁ phase
 - S phase
 - G₂ 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?
- G₁ phase
 - S phase
 - G₂ 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
- G₁ phase
 - S phase
 - G₂ 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.
 - a. Prophase I
 - b. Metaphase I
 - c. Anaphase I
 - d. Telophase I
- 33. The egg and sperm cells only contain 23 sets of chromosomes; therefore, they are considered?
 - a. Diploid
 - b. Haploid
 - c. Autosomes
 - d. Somatic cells
- 34. When homologous chromosomes align gene by gene, which structure is formed?
 - a. Gene
 - b. Locus
 - c. Tetrad
 - d. Autosomes
- 35. Genes are located in which part of the chromosome?
 - a. Autosome
 - b. Tetrad
 - c. Sister Chromosomes
 - d. Locus