

**SAINIK SCHOOL GOPALGANJ**  
**ASSIGNMENTS**  
**BIOLOGY (44)**

**Chapter 08: Cell structure and Function**

**Class: XI**

***General Instructions***

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1. *All questions are compulsory.*
  2. *Question 1 to 10 is multiple choice questions.*
  3. *Question 11 to 15 is short answer questions.*
  4. *Question 16 to 20 is long answer questions*
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1. This cell is the longest in the human body
  - (a) Muscle cells
  - (b) Nerve cells
  - (c) Bone cells
  - (d) Gland cells
2. This tissue includes the blood tissue
  - (a) Muscle tissue
  - (b) Connective tissue
  - (c) Epithelial tissue
  - (d) Nervous tissue
3. Which of this is/are examples of an organ containing a smooth muscle?
  - (a) Iris of eye
  - (b) Bronchi only
  - (c) Uterus only
  - (d) All of the above
4. This structure of the plant cell is non-living
  - (a) Nucleus
  - (b) cell wall
  - (c) cytoplasm
  - (d) Mitochondrion
5. This cell organelle does not contain DNA
  - (a) Nucleus
  - (b) Mitochondria
  - (c) Lysosomes

(d) Chloroplast

6. The main difference between human cheek cells and onion peel cells is

- (a) Presence of cell wall in onion peel cells
- (b) Presence of mitochondria in onion peel cells
- (c) Absence of endoplasmic reticulum in cheek cells
- (d) Absence of plasma membrane in cheek cells

7. This jellylike substance inside the plasma membrane in which all cell organelles are floating is

- (a) Cytoplasm
- (b) Tonoplasm
- (c) Karyoplasm
- (d) Cell sap

8. The organelle serving as a primary packaging area for molecules that will be distributed throughout the cell is

- (a) Vacuole
- (b) Plastids
- (c) Mitochondria
- (d) Golgi apparatus

9. Animal cells are interconnected by

- (a) Plasma membrane
- (b) Cell wall
- (c) Desmosomes
- (d) Plasmodesmata

10. The Cell theory is not applicable to

- (a) Fungi
- (b) Algae
- (c) Virus
- (d) Microbes

11. What are plasmids? Describe their role in bacteria?

12. Comment on the cartwheel structure of centriole.

13. What are histones? What are their functions?

14. Differentiate between Rough Endoplasmic Reticulum (RER) and Smooth Endoplasmic Reticulum (SER).
15. Give the biochemical composition of plasma membrane. How are lipid molecules arranged in the membrane?
16. Briefly give the contributions of the following scientists in formulating the cell theory
- Robert Virchow
  - Schleiden and Schwann
17. Eukaryotic cells have organelles which may
- not be bound by a membrane
  - bound by a single membrane
  - bound by a double membrane
- Group the various sub-cellular organelles into these three categories.
18. Justify the statement, "Mitochondria are power houses of the cell"
19. Write the functions of the following
- Centromere
  - Cell wall
  - Smooth ER
  - Golgi Apparatus
  - Centrioles
20. Are the different types of plastids interchangeable? If yes, give examples where they are getting converted from one type to another.