

Board – ICSE

Class – 9

Topic – CELL:UNIT OF LIFE

1. Define a cell.
2. When was the cell theory propounded?
3. Name the scientist who observed the honeycomb-like structures in a thin section of cork under simple microscope. What did he mean by these structures?
4. Draw labeled diagrams to show various structures found in animal cells.
5. What is cell theory? Name the scientists who formulated it.
6. Give three differences between cell wall and cell membrane.
7. Differentiate between the following
  - (a) Cytoplasm and Protoplasm
  - (b) Cell organelles and Cell inclusions
  - (c) Prokaryotic and Eukaryotic cell
8. The following diagram represents cells from cheek lining (Fig. I) and plant cells (Fig. II). Label the parts against the indicated alphabets / numbers

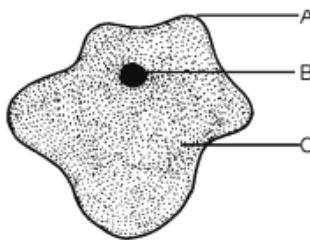


Fig. I

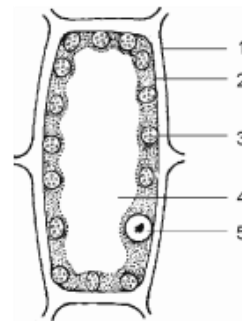


Fig. II

9. Give the location and the function of the following parts of the cell:
  - (a) Plasma membrane
  - (b) Chromosomes
  - (c) Endoplasmic reticulum
  - (d) Ribosome
10. Fill in the blanks:
  - (i) Ribosomes are rich in \_\_\_\_\_ and \_\_\_\_\_.
  - (ii) RNA stands for \_\_\_\_\_.
  - (iii) Virchow stated \_\_\_\_\_.

- (iv) Plasma membrane is made up of \_\_\_\_\_ and \_\_\_\_\_.
- (v) Membrane less nuclear area found in prokaryotic cells is called \_\_\_\_\_
11. Lysosomes are said to be 'suicidal bags'. Comment.
12. Name the features possessed (a) by plant cells only, and (b) by animal cell only.
13. Where genes are present in a cell and what is their chemical nature?
14. Differentiate between the following
- (a) Nucleus and Nucleolus (on the basis of function)
  - (b) Chloroplast and Leucoplast (on the basis of function)
  - (c) Chromatin and Chromosomes (on the basis of structure)
15. What are plastids? Give different kinds of plastids and their functions.
16. State four differences between a plant cell and an animal cell.
17. Complete the following by selecting the correct word
- (i) Genes are made up of \_\_\_\_\_. (RNA / DNA / protein)
  - (ii) In plants, cell wall is mainly composed of \_\_\_\_\_. (chitin / cellulose / protein)
  - (iii) Nucleus was discovered by \_\_\_\_\_. (Robert Hooke / Robert Brown/ M. J. Schleiden)
  - (iv) Oxysomes are found in \_\_\_\_\_. (chloroplast / mitochondria / golgi body)
18. Give structure of the nucleus. What is the importance of nucleus?
19. Give the location and the function of the following parts of the cell
- (a) Cell wall \_\_\_\_\_
  - (b) Centriole \_\_\_\_\_
  - (c) Nucleolus \_\_\_\_\_
  - (d) Chloroplast \_\_\_\_\_
20. Answer the following:
- (a) Cellular digestion is associated with which organelle?
  - (b) Name two cell organelles which are enclosed by double membrane walls.
  - (c) A plastid containing colored pigments
  - (d) What is the term used to describe the nucleus lacking the nuclear membrane?
  - (e) Name the membrane system connecting the nucleus with the plasma membrane.