

**CLASS 9**  
**SUBJECT – SCIENCE**  
**CHAPTER – CELL: THE FUNDAMENTAL UNIT OF LIFE**  
**CONCEPT – CELL: THE FUNDAMENTAL UNIT OF LIFE**  
**WORKSHEET – 3 MCQ**

- Q1 Which of the following can be made into crystal? 1  
a) A Bacterium b) An Amoeba  
c) A Virus d) A Sperm
- Q2 A cell will swell up if 1  
a) The concentration of water molecules in the cell is higher than the concentration of water molecules in surrounding medium  
b) The concentration of water molecules in surrounding medium is higher than water molecules concentration in the cell  
c) The concentration of water molecules is same in the cell and in the surrounding medium  
d) Concentration of water molecules does not matter
- Q3 Chromosomes are made up of 1  
a) DNA b) Protein  
c) DNA and protein d) RNA
- Q4 Which of these options are not a function of Ribosomes? 1  
(i) It helps in manufacture of protein molecules  
(ii) It helps in manufacture of enzymes  
(iii) It helps in manufacture of hormones  
(iv) It helps in manufacture of starch molecules  
a) (i) and (ii) b) (ii) and (iii)  
c) (iii) and (iv) d) (iv) and (i)
- Q5 Which of these is not related to endoplasmic reticulum? 1  
a) It behaves as transport channel for proteins between nucleus and cytoplasm  
b) It transports materials between various regions in cytoplasm  
c) It can be the site of energy generation  
d) It can be the site for some biochemical activities of the cell
- Q6 Following are a few definitions of osmosis 1  
Read carefully and select the correct definition  
a) Movement of water molecules from a region of higher concentration to a region of lower concentration through a semipermeable membrane  
b) Movement of solvent molecules from its higher concentration to lower concentration  
c) Movement of solvent molecules from higher concentration to lower concentration of solution through a permeable membrane  
d) Movement of solute molecules from lower concentration to higher concentration of solution through a semipermeable membrane
- Q7 Plasmolysis in a plant cell is defined as 1  
a) Break down (lysis) of plasma membrane in hypotonic medium  
b) Shrinkage of cytoplasm in hypertonic medium  
c) Shrinkage of nucleoplasm  
d) None of them

- Q8 Which of the following are covered by a single membrane? 1
- Mitochondria
  - Vacuole
  - Lysosome
  - Plastid
- Q9 Find out the false sentences 1
- Golgi apparatus is involved with the formation of lysosomes
  - Nucleus, mitochondria and plastid have DNA; hence they are able to make their own structural proteins
  - Mitochondria is said to be the power house of the cell as ATP is generated in them.
  - Cytoplasm is called as protoplasm
- Q10 Find out the correct sentence 1
- Enzymes packed in Lysosomes are made through RER (rough endoplasmic reticulum)
  - Rough endoplasmic reticulum and smooth endoplasmic reticulum produce lipid and protein respectively
  - Endoplasmic reticulum is related with the destruction of plasma membrane
  - Nucleoid is present inside the nucleoplasm of eukaryotic nucleus.
- Q11 Which cell organelle plays a crucial role in detoxifying many poisons and drugs in a cell? 1
- Golgi apparatus
  - Lysosomes
  - Smooth endoplasmic reticulum
  - Vacuoles
- Q12 The proteins and lipids, essential for building the cell membrane, are manufactured by 1
- Rough endoplasmic reticulum
  - Golgi apparatus
  - Plasma membrane
  - Mitochondria
- Q13 The undefined nuclear region of prokaryotes is also known as 1
- Nucleus
  - Nucleolus
  - Nucleic acid
  - Nucleoid
- Q14 The cell organelle involved in forming complex sugars from simple sugars are 1
- Endoplasmic reticulum
  - Ribosomes
  - Plastids
  - Golgi apparatus
- Q15 Which out of the following is not a function of vacuole? 1
- Storage
  - Providing turgidity and rigidity to the cell
  - Waste excretion
  - Locomotion
- Q16 Amoeba acquires its food through a process, termed 1
- Exocytosis
  - Endocytosis
  - Plasmolysis
  - Exocytosis and endocytosis both
- Q17 Cell wall of which one of these is not made up of cellulose? 1
- Bacteria
  - Hydrilla
  - Mango tree
  - Cactus
- Q18 Silver nitrate solution is used to study 1
- Endoplasmic reticulum
  - Golgi apparatus

- |     |  |                                |   |
|-----|--|--------------------------------|---|
|     | c) Nucleus   | d) Mitochondria                |   |
| Q19 | Organelle other than nucleus, containing DNA is  |                                | 1 |
|     | a) Endoplasmic reticulum   | b) Golgi apparatus             |   |
|     | c) Mitochondria  | d) Lysosome                    |   |
| Q20 | Kitchen of the cell is   |                                | 1 |
|     | a) Mitochondria  | b) Endoplasmic reticulum       |   |
|     | c) Chloroplast   | d) Golgi apparatus             |   |
| Q21 | Lipid molecules in the cell are synthesized by   |                                | 1 |
|     | a) Smooth endoplasmic reticulum  | b) Rough endoplasmic reticulum |   |
|     | c) Golgi apparatus   | d) Plastids                    |   |
| Q22 | Cell arises from pre-existing cell was stated by   |                                | 1 |
|     | a) Haeckel   | b) Virchow                     |   |
|     | c) Hooke   | d) Schleiden                   |   |
| Q23 | Cell theory was given by   |                                | 1 |
|     | a) Schleiden and Schwann   | b) Virchow                     |   |
|     | c) Hooke   | d) Haeckel                     |   |
| Q24 | The only cell organelle seen in prokaryotic cell is  |                                | 1 |
|     | a) Mitochondria  | b) Ribosomes                   |   |
|     | c) Plastids  | d) Lysosomes                   |   |
| Q25 | Organelle without a cell membrane is   |                                | 1 |
|     | a) Ribosome  | b) Golgi apparatus             |   |
|     | c) Chloroplast   | d) Nucleus                     |   |
| Q26 | Lysosome arises from   |                                | 1 |
|     | a) Endoplasmic reticulum   | b) Golgi apparatus             |   |
|     | c) Nucleus   | d) Mitochondria                |   |
| Q27 | Living cells were discovered by  |                                | 1 |
|     | a) Robert Hooke  | b) Purkinje                    |   |
|     | c) Leeuwenhoek   | d) Robert Brown                |   |
| Q28 | Select the odd one out   |                                | 1 |
|     | a) The movement of water across a semi permeable membrane is affected by the number of substances dissolved in it. |                                |   |
|     | b) Membranes are made of organic molecules like proteins and lipids  |                                |   |
|     | c) Molecules soluble in organic solvents can easily pass through the membrane.                                     |                                |   |
|     | d) Plasma membranes contain chitin sugar in plants   |                                |   |