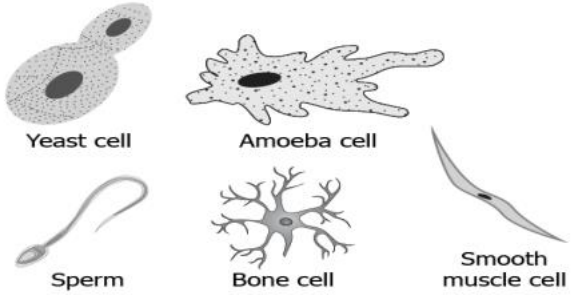
SUBJECT – SCIENCE
CHAPTER – 5
CONCEPT – CELL: THE FUNDAMENTAL UNIT OF LIFE
WORKSHEET – 1 MCQ (APPLICATION BASED)

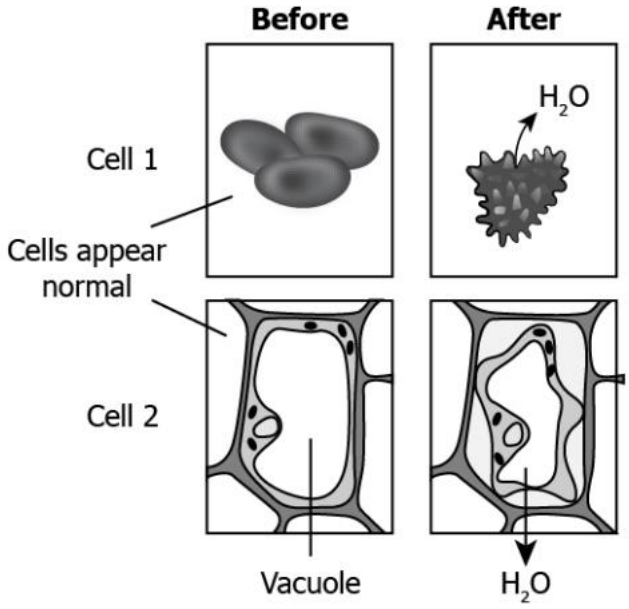
Q1 The image shows some types of cells. **1**



Based on the image what could be the reason for the different shape and size? **1**
(a) to suit their function
(b) as they are formed first or last in the body
(c) as they are all animal cells
(d) as some are plant cells and some animal cells

Q2 What will likely happen if an animal cell and a plant cell are placed in a sugar solution that has water concentration more than that of the animal cell and the plant cell? **1**
(a) Both the animal and plant cell will burst.
(b) Both the animal and plant cell will swell.
(c) Animal cell will swell while the plant cell will burst.
(d) Animal cell will burst while the plant cell will swell.

Q3 The image shows how the two cells appear before and after placing in a hypertonic solution. **1**

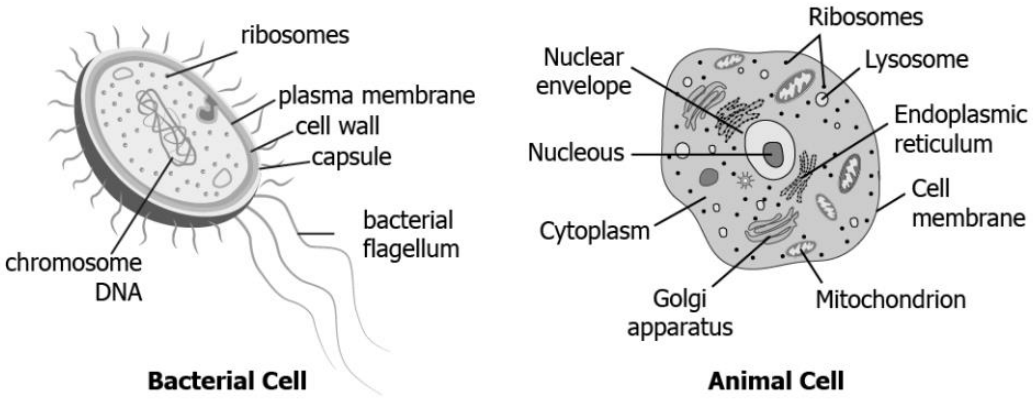


Based on the behaviour of the cell, identify the cell types?
(a) Cell 1: animal cell, Cell 2: plant cell
(b) Cell 1: bacterial cell, Cell 2: plant cell
(c) Cell 1: Plant cell, Cell 2: animal cell

(d) Cell 1: animal cell, Cell 2: bacterial cell

Q4 What is a basis for differentiation of a prokaryotic cell from a eukaryotic cell? **1**
(a) presence or absence of cytoplasm
(b) presence or absence of cell membrane
(c) presence or absence of genetic material
(d) presence or absence of membrane bound organelles

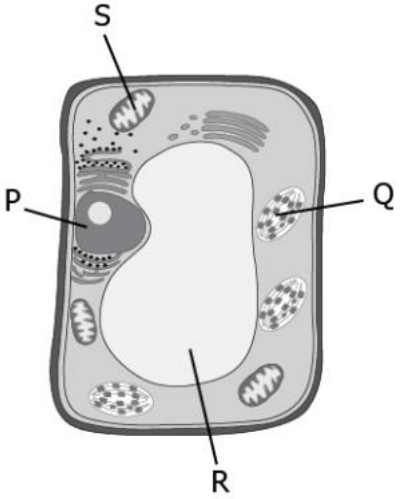
Q5 The image shows a bacterial cell and an animal cell. **1**



Bacterial Cell **Animal Cell**

Based on the structures, a student claims that the animal cell contains complex structures that are absent in the bacterial cell. Which statement can the student make to support the claim?
(a) Animal cell contains flagella that aids in locomotion that is absent in case of a bacterial cell.
(b) Nuclear material of the bacterial cell is not enclosed in a nuclear envelope as in case of an animal cell. *
(c) Cytoplasmic content of the bacterial cell is not enclosed in a thick cell wall as in case of an animal cell.
(d) Animal cell contains ribosomes spread across the cell whereas in case of bacterial cell they are clumped together.

Q6 The image shows a plant cell. **1**



Which marked part is responsible for the generation of energy in the cell?
(a) P (b) Q
(c) R (d) S

Q7 Which of following is the function of cytoplasm present in the cell? **1**
(a) It plays a central role in cellular reproduction.
(b) It is involved in the formation of lysosomes.
(c) It helps transport material into the cell.
(d) It holds the organelles of the cell in place.

Q8 The table lists some functions performed by some cell structures. **1**

P.	It separates the content of the cell from the surroundings.
Q.	It is a site where many cellular processes occur.
R.	It controls the process of cell division.
S.	It controls the movement of substances in and out of the cells.

Which option shows the organelle correctly matched with the respective function?
(a) Cytoplasm- Q and S, nucleus- P, plasma membrane- R
(b) Cytoplasm- Q and R, nucleus- P, plasma membrane- S
(c) Cytoplasm- Q, nucleus- R, plasma membrane- S and P
(d) Cytoplasm- R, nucleus- Q, plasma membrane- S and P

Q9 Which of the following function is performed by smooth endoplasmic reticulum? **1**
(a) It helps expel excess water and waste out of the cell.
(b) It helps produced ATP molecules.
(c) It helps digest small foreign particles.
(d) It helps detoxify the drugs

Q10 How endoplasmic reticulum helps transport protein between various regions of the cytoplasm? **1**
(a) by forming a network of membrane-bound tubes in the cytoplasm
(b) by occupying most of the space in the cytoplasm
(c) by generating small transport vesicles throughout the cell
(d) by directing all cell organelles to perform the same biochemical activity