

B.Sc. BIOTECHNOLOGY
FIRST SEMESTER
CELL BIOLOGY
BBT-102 (IDMn)
[USE OMR SHEET FOR OBJECTIVE PART]

SET
A

Duration: 1hr. 30 mins.

Full Marks: 35

Time: 15 mins.

(Objective)

Marks: 10

Choose the correct answer from the following:

1×10=10

- Which of the following solution contains a low concentration of solute relative to another solution?
a. Hypertonic
b. Deurotonic
c. Isotonic
d. Hypotonic
- Sarcoplasmic reticulum is associated with:
a. Hormone synthesis
b. Release of calcium ions from muscle contractions
c. Protein synthesis
d. None
- Which of the following organelle is called the "suicidal bags" of the cell?
a. Cytoplasm
b. Endoplasmic Reticulum
c. Mitochondria
d. Lysosomes
- The plant cell absorbs..... by osmosis.
a. Water
b. Sulphur
c. Phosphorous
d. Carbon
- SER produces:
a. Nucleic acid
b. Lipid
c. Carbohydrate
d. Protein
- If the solution is with high concentration or more solute then it issolution.
a. Hypertonic
b. Hypotonic
c. Both
d. None
- What is the pH of a lysosome?
a. Neutral
b. Basic
c. Acidic
d. Depends on the cell type
- Which of the following cell is responsible for the water loss from its vacuole and the cytoplasm shrinks and is withdrawn from the cell wall?
a. Turgid cell
b. Turgor cell
c. Plasmolysed cell
d. Both a and b
- Name the scientist who discovered Golgi apparatus.
a. Robert Brown
b. Theodor Schwann
c. Rudolf Virchow
d. Camillo Golgi

10. In the plants, it changes the turgor of guard cells that causes the opening of the.....
- a. Phloem
 - b. Xylem
 - c. Stomata
 - d. None of these

-- -- --

(Descriptive)

Time : 1 hr. 15 mins.

Marks : 25

[Answer question no.1 & any two (2) from the rest]

- | | |
|---|--------|
| 1. Define: | 5 |
| a) Osmosis | |
| b) Diffusion | |
| 2. What is the plasma membrane? Write a note on the functions of Plasma Membrane | 10 |
| 3. Differentiate between: | 2×5=10 |
| a) Prokaryotic cells and Eukaryotic cells | |
| b) Active Transport and Passive Transport | |
| 4. Describe the structure of the Endoplasmic Reticulum. Write a note on its function. | 10 |
| 5. What is mitosis? Describe in the detail the different phases of mitosis. | 10 |

= = *** = =