

**B.Sc. MICROBIOLOGY
SECOND SEMESTER
CELL BIOLOGY
BMB-202**

**SET
A**

[USE OMR SHEET FOR OBJECTIVE PART]

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 these scientists formulated the cell theory?
 - Schleiden and Schwann
 - Rudolf Virchow
 - Robert Koch
 - Antony Von Leeuwenhoek
- Which of these is not a postulate of the cell theory?
 - Cells are the basic units of life
 - All cells contain a nucleus which has the genetic material
 - Living things are composed of one or more cells
 - Cells arise from existing cells
- Stroma is the ground material of which of these?
 - Ribosomes
 - Lysosomes
 - Mitochondria
 - Chloroplasts
- Oxysomes of F₀-F₁ particles take place on:
 - Chloroplast surface
 - Thylakoid
 - Inner mitochondrial membrane
 - Mitochondrial surface
- Typically, the inner membrane of mitochondria is highly convoluted to form a series of infolding known as:
 - Grana
 - Thylakoids
 - Cristae
 - Lamellae
- Name the scientist who discovered Golgi apparatus.
 - Robert Remake
 - Rudolf Virchow
 - Camillo Golgi
 - Theodor Schwann
- Which of the following microorganism have two nuclei?
 - Slime molds
 - Cyanobacteria
 - Amoeba
 - Paramecium
- Which of the following is not a component of the nucleus?
 - Chromosome
 - Nucleolus
 - Cytoplasm
 - Nuclear envelope
- Tonoplast is a _____.
 - Membrane
 - Toxic compound
 - Sphingolipid
 - Glycoprotein

10. Which of the following cell organelles is called a suicidal bag?
- a. Lysosomes
 - b. Golgi bodies
 - c. Cell membrane
 - d. Mitochondria

-- -- --

(Descriptive)

Time : 1 hr. 15 mins.

Marks : 25

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

- | | |
|---|--------|
| 1. What is Cell Theory? Write the three tenants of Cell Theory. | 5 |
| 2. Explain and describe the structure and functions of Golgi Complex. | 5+5=10 |
| 3. Write short notes on <i>any two</i> : | 2×5=10 |
| a) Lysosome | |
| b) Vacuole | |
| c) Peroxisome | |
| 4. Explain and describe the structure and functions of mitochondria. | 5+5=10 |
| 5. Differentiate between: | 5+5=10 |
| a) Smooth endoplasmic reticulum and rough endoplasmic reticulum. | |
| b) Prokaryotic Cell and Eukaryotic Cell. | |

== *** ==