

Name: _____				
Subject: Biology	Class: 11 th	Time: 80 minutes	Total Marks:	40
Chapter No.4 1 st half	MJDexpert.com		Obtained marks	

Note: Please attempt any 11 short questions from Question 2. Also, attempt both parts (a and b) of Question 3. Cutting and removal of any content is strictly prohibited.

Objective-Section

Q. 1 Encircle the correct answer. (10x1=10)

- Who discovered the cell in 1665?
(A) Jean Baptist de-Lamarck (B) Robert Brown (C) Robert Hooke (D) Theodor Schwann
- What is the primary component of the cell wall in plant cells?
(A) Chitin (B) Peptidoglycan (C) Cellulose (D) Lignin
- Which scientist proposed that new cells are formed only from previously existing cells?
(A) Louis Pasteur (B) Theodor Schwann (C) Rudolph Virchow (D) Lorenz Oken
- In the Fluid Mosaic Model, what are embedded in the lipid bilayer?
(A) Carbohydrates (B) Proteins (C) Nucleic acids (D) Lipids
- What does the endoplasmic reticulum help with in cells?
(A) Storage of nutrients (B) Synthesis of proteins and lipids (C) Photosynthesis (D) Cellular respiration
- Which component of the cell is responsible for modifying proteins and lipids?
(A) Mitochondria (B) Golgi Apparatus (C) Ribosomes (D) Lysosomes
- What is the primary function of the plasma membrane?
(A) To provide structural support (B) To act as a barrier and control substance movement (C) To store genetic information (D) To conduct metabolic processes
- What type of microscope has a resolution of 2-4 Angstroms?
(A) Compound microscope (B) Light microscope (C) Scanning electron microscope (D) Transmission electron microscope
- Which of the following is NOT a feature of prokaryotic cells?
(A) Lack of nucleus (B) Presence of cell wall (C) Presence of ribosomes (D) Presence of membrane-bound organelles
- What role does the cytoplasm play in the cell?
(A) Synthesis of proteins (B) Storage of genetic material (C) Site for metabolic processes and storage of chemicals (D) Transport of materials

Subjective-Section

Q.2 Write short answers of any ten of the following questions: (11x2=22)

- Describe the contribution of Robert Hooke to cell biology.
- What are the three basic parts of a cell according to the Cell Theory?
- Explain the significance of Louis Pasteur's experiment related to cell theory.
- How does the cell wall differ between plant and prokaryotic cells?
- What is the function of ribosomes in a cell?
- Define the term 'cytoplasm' and list its main components.
- What is the difference between rough and smooth endoplasmic reticulum?
- Describe the structure and function of the plasma membrane.
- What is the role of Golgi Apparatus in a cell?
- How did the development of microscopy contribute to the understanding of cell structure?
- Explain the term 'Fluid Mosaic Model' in relation to the cell membrane.
- What is the resolution power of a typical compound microscope?

Q.No.3 Long Question:

- Discuss the Cell Theory in detail, including its origin, development, and implications.
- Explain how the advances in microscopy have enhanced our understanding of cell structure and function.