

**BACHELOR OF SCIENCE (CBCS-2018 COURSE)**  
**F. Y. B. Sc. Sem-I : WINTER :- 2021**  
**SUBJECT: BOTANY : CELL BIOLOGY**

**Day : Saturday**  
**Date 29-01-2022**

**W-18299-2021**

**Time : 10:00 AM-01:00 PM**  
**Max. Marks: 60**

**N.B.**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the **RIGHT** indicate **FULL** marks.
- 3) Draw neat diagrams **WHEREVER** necessary.

**Q.1** Attempt **ANY TWO** of the following. **(12)**

- a) Give types of Ribosomes and its functions.
- b) Describe nuclear envelope and nuclear pore complex.
- c) Explain stages of Mitosis.

**Q.2** Attempt **ANY TWO** of the following. **(12)**

- a) What is Meiosis? Explain stages in prophase of meiosis.
- b) Describe Peroxisomes and Glyoxysomes.
- c) Explain Mitochondria as power house of cell.

**Q.3** Attempt **ANY TWO** of the following. **(12)**

- a) Describe the ultrastructure of chloroplast.
- b) Define centromere and give its function.
- c) Explain organization of cellulose in cell wall.

**Q.4** Attempt **ANY THREE** of the following. **(12)**

- a) Explain structure of endoplasmic reticulum and its functions.
- b) Describe ultrastructure of nucleus.
- c) Comment on 'Lysosome as suicidal bag.'
- d) Explain nucleolus in plant cell.

**Q.5** Attempt **ANY FOUR** of the following. **(12)**

- a) Give the functions of plasma membrane.
- b) Distinguish between exocytosis and endocytosis.
- c) Comment on resting cell and dividing cell.
- d) Give differences between euchromatin and heterochromatin.
- e) Explain concept of apoptosis.
- f) Give types of spindle fiber in cell division.

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