

B.Sc. Semester-V Examination, 2022-23**BOTANY**[Programme]

Course ID : 51318 Course Code : SP/BOT/501/DSE-1A

Course Title : Cell and Molecular Biology

Time : 1 Hour 15 Minutes

Full Marks : 25

*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.***UNIT-I**

1. Answer any **five** of the following questions: $1 \times 5 = 5$
- Mention the basic composition of cell wall.
 - What are linked gens?
 - What is the role of TATA box?
 - Differentiate between nucleoside and nucleotide.
 - What are the different stages of cell cycle?
 - Mention one membrane less and one single membrane enveloped cell organelles.
 - What is an electron microscope?
 - What is the main function of synaptonemal complex?

2. Answer any **two** of the following questions: $5 \times 2 = 10$
- Briefly describe the ultrastructure of mitochondria.
 - Explain the Fluid Mosaic Model of cell membrane.
 - Briefly describe the different substages of Prophase-I of meiosis cell division.
 - State the difference between Prokaryotic and Eukaryotic cell.

UNIT-III

3. Answer any **one** of the following questions: $10 \times 1 = 10$
- What is cell cycle? Briefly describe the cell cycle. 2+8
 - What do you mean by transcription? Describe the process of eukaryotic transcription with neat sketches. 2+8
