

# Bankura University

## B.Sc 1st SEMESTER(Honours) EXAMINATIONS, 2021

Subject: BOTANY

Course ID: 11312

Course Code:SH/BOT /102/C-2

Course Title: Biomolecules and Cell Biology

Full Marks: 25

Time: 1h 15 min

The figures in the margin indicate full marks

Answer all the questions.

### UNIT - I

1. Answer *any five* of the following questions: 1x5=5

- a) What is isoelectric point?
- b) Give an example of a polysaccharide?
- c) Give example of quaternary structure of a protein?
- d) Differentiate between holoenzyme and apoenzyme.
- e) Differentiate between exergonic and endergonic reaction.
- f) What is the principle of endosymbiotic theory?
- g) What is the specific function of peroxisome ?
- h) What is the role of checkpoints in a cell cycle?

### UNIT - II

2. Answer *any two* of the following questions: 5x2=10

- a) Describe the classification of enzymes by IUB System citing example of each class.
- b) Briefly describe the structure of B-DNA .
- c) Describe the Ultra structure of nuclear pore complex (NPC) with a recent model .
- d) Elucidate the various types of membrane transport systems.

### UNIT-III

3. Answer *any one* of the following questions: 1x10=10

- a) Describe with suitable diagrams the process of meiotic prophase-1. How prophase-I differs from prophase-II.
- b) What is peptide bond? Describe briefly the different types of protein structures.

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