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Total No. of Questions: 16 ] [ Total No. of Printed Pages: 3

## BIOTSEM-135

# M.Sc. (Ist Semester) Examination Dec., 2022 BIOTECHNOLOGY

Paper -BT-102

(Cell Biology)

Time: 3 Hours [ Maximum Marks: 40

The question paper contains three Sections.

Section-A (Marks :  $1 \times 10 = 10$ )

**Note**: Answer all *ten* questions. Answer should not exceed **50** words. Each question carries **1** mark.

Section–B (Marks :  $3 \times 5 = 15$ )

**Note**: Answer *five* questions by selecting at least *one* question from each Unit. Answer should not exceed **200** words. Each question carries **3** marks.

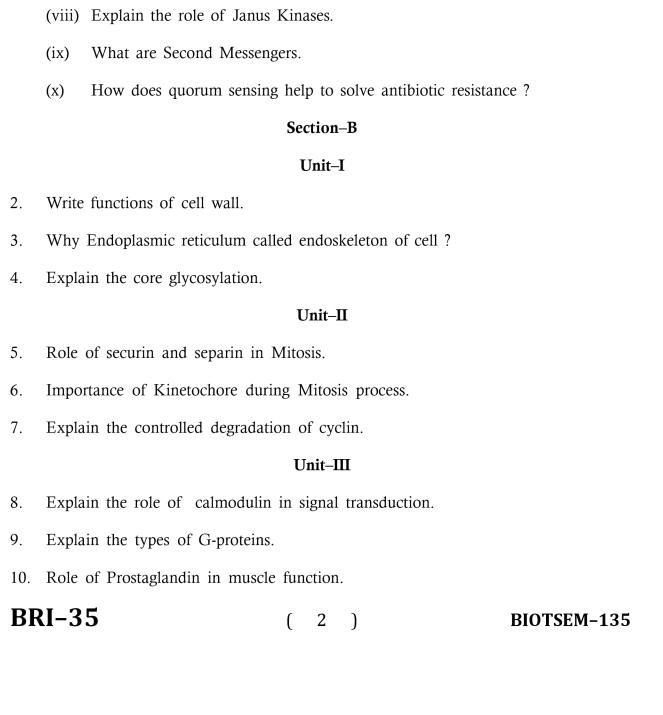
Section–C (Marks:  $5 \times 3 = 15$ )

**Note**: Answer any *three* questions by selecting at least *one* question from each Unit. The answer should not exceed **500** words. Each question carries **5** marks.

#### Section-A

- 1. (i) Define the Plasmodesmata.
  - (ii) What is Mesosomes?

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What do you mean by Checkpoints? Explain the role of G2 checkpoint

Differentiate between heterochromatin and Euchromatin.

(iii)

(iv)

(v)

(vi)

(vii)

in Mitosis.

Define the Hematopoiesis.

What are Aquaporins?

Define the Heterophagy.

### Section-C

### Unit-I

- 11. Explain the various types of cell-cell functions.
- 12. Function of Golgi complex.

### Unit-II

- 13. Explain the genetical and Evolutionary significance of Mitosis and Meiosis.
- 14. What are the significance of check points during cell cycles.

### Unit-III

- 15. Explain the role of calcium ions as secondary messenger.
- 16. Briefly describe the quorum sensing.

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