

B.Sc. Semester - 2 (NEP-2020) Examination**JUNE – 2024****BOT: Cell Biology (Multidisciplinary Course)****Time: 2:00 Hours****Marks: 50****Instructions:**

1. All questions are compulsory.
 2. Figures to the right indicate marks.
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Que.1 Answer the following question.

- (1) Explain the Endosymbiotic theory for origin of eukaryotic cell. (05)
- (2) Write short account of the concept of cell theory and its extension. (05)

OR

Que.1 Answer the following question.

- (1) State the contribution of major scientist in cell biology. (05)
- (2) Describe the prophase – I of meiosis. (05)

Que.2 Answer the following question.

- (1) Give the functions of plant cell wall. (05)
- (2) Discuss the fluid mosaic model for cell membrane. (05)

OR

Que.2 Answer the following question.

- (1) Discuss : Endocytosis (05)
- (2) Describe different types of membrane proteins. (05)

Que.3 Answer the following question.

- (1) Describe the ultra structure of chloroplast. (05)
- (2) Discuss the functions of mitochondrion. (05)

OR

Que.3 Answer the following question.

- (1) Give the functions of endoplasmic reticulum. (05)
- (2) Describe the structure of Golgi complex and discuss its relationship with ER. (05)

Que.4 Answer the following question.

- (1) Describe the Structure of nuclear envelope. (05)
- (2) Describe the structure of microtubules and discuss its role in cell division. (05)

OR

Que.4 Answer the following question.

- (1) Discuss the role of microfilaments in muscle cells. (05)
- (2) Write a short note on intermediate filaments. (05)

Que.5 Answer the following question.

- (1) Discuss the role of ion channels in active transport. (05)
- (2) Write a short note on lysosome. (05)

OR

Que.5 Answer the following question.

- (1) Compare the contrast of mitotic cell division with meiosis. (05)
- (2) What is nucleolus? Describe it. (05)
