

B.Sc. (NEP) - Semester-I
BSCBT501 - Biotechnology - Cell Biology-I

P. Pages : 2

Time : Three Hours



GUG/W/24/15918

Max. Marks : 40

1. Write the role of any four scientists in the discovery of cell. **8**

OR

- a) Explain – Cell as a basic unit of living systems. **2**
- b) Give the structure of the nerve-cell and explain. **2**
- c) Explain the structure of plant cell. **2**
- d) Write a note on cell theory. **2**

2. Write a note on fluid Mosaic model for plasma membrane. **8**

OR

- a) Give the structure of Gram positive bacterial cell wall in brief. **2**
- b) Give the structure and function of nucleus. **2**
- c) Explain the structure of mitochondria. **2**
- d) Give the structure of Golgi complex. **2**

3. Write a note on different types of cell locomotions. **8**

OR

- a) Give the structure of Microtubules. **2**
- b) What are intermediate filaments? **2**
- c) Give the structure of dyneins. **2**
- d) Write a note on dynamic instability. **2**

4. Write a note on different phases of cell cycle. **8**

OR

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|----|---|---|
| a) | Write a note on telophase. | 2 |
| b) | Write a note on cell senescence. | 2 |
| c) | What is cell synchronization? | 2 |
| d) | Write a note on cell differentiation in plants. | 2 |

5. Answer any eight.

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|----|--|---|
| a) | What is the contribution of Jakob Schleiden? | 1 |
| b) | Who proposed the cell theory? | 1 |
| c) | Write any two differences between plant & animal cells. | 1 |
| d) | What is the function of nucleolus? | 1 |
| e) | Presence of what makes smooth endoplasmic reticulum a rough endoplasmic reticulum? | 1 |
| f) | What is the function of granules? | 1 |
| g) | What is the function of Kinesins? | 1 |
| h) | What is vimentins? | 1 |
| i) | What is the difference between alpha and beta tubulin? | 1 |
| j) | Name the stages of mitosis in sequence of their occurrence. | 1 |
| k) | What is apoptosis? | 1 |
| l) | Mention any two differences between mitosis and meiosis. | 1 |
