

Bachelor of Science (B.Sc.) First Semester (Old)
BIO-01 - Biotechnology Paper-I (Cell And Cell Organelles)

P. Pages : 2

Time : Three Hours



GUG/W/18/1220

Max. Marks : 50

1. Describe the Structure and function of Muscle cell and nerve cell. **10**

OR

Describe the structure and function of bacterial plasma membrane. **10**

2. Describe the structure and function of Microtubulin. **10**

OR

Describe the cell cycle and give the significance of various phases of cell cycle. **10**

3. a) Draw a well labelled diagram of animal cell. **2½**

b) Describe the structure and function of Golgi complex. **2½**

c) Describe Amoeboid locomotion. **2½**

d) Write a note on cell senescence. **2½**

OR

e) Write the contribution of Theodor Schwann. **2½**

f) Draw the well labelled diagram of Mitochondria. **2½**

g) Write a note on Dynamic instability. **2½**

h) Give the Significance of cytokinesis. **2½**

4. a) Differentiate between plant cell and animal cell. **2½**

b) Describe the structure and function of chloroplast. **2½**

c) Describe the functions of intermediate filament. **2½**

d) Enlist the various stages of meiosis. **2½**

OR

e) Give brief account on cell as a basic unit of living System. **2½**

f) Describe the structure and function of Nucleus. **2½**

g) Write a note on tubulin synthesis? **2½**

h) Describe the cell differentiation in plant. **2½**

5. Attempt any ten.

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| a) Write the contribution of Robert Hook. | 1 |
| b) What is cell volume? | 1 |
| c) Define Eukaryotic cell with example. | 1 |
| d) Name the components of bacterial cell wall. | 1 |
| e) Give the role of cytosol. | 1 |
| f) Give the function of Rough Endoplasmic Reticulum. | 1 |
| g) What is the role of Actin filament. | 1 |
| h) What is Ciliar locomotion. | 1 |
| i) Give the function of lamins. | 1 |
| j) Define cell Synchronization. | 1 |
| k) What is the Significance of Metaphase. | 1 |
| l) What is G2 Phase. | 1 |
