

B.Sc. (With Credits)-Regular-Semester 2012 Sem I
BIO-01 - Biotechnology : Paper-I (Cell and Cell Organelles)

P. Pages : 2

Time : Three Hours



GUG/W/16/3298

Max. Marks : 50

Notes : 1. All questions are compulsory and carry equal marks.

1. Describe the structure and function of Muscle cell and Nerve cell. **10**

OR

Describe the structure & function of gram positive bacterial cell wall. **10**

2. Explain different types of cell locomotion with example. **10**

OR

Describe cell synchronization & give its applications. **10**

3. a) Differentiate between the prokaryotic cell & eukaryotic cell. **2½**

b) Write about fluid mosaic model of plasma membrane. **2½**

c) Write note on – Tubulin synthesis. **2½**

d) Explain the cell differentiation in plants. **2½**

OR

e) Give the classification of cell on the basis of shape & size of the cell. **2½**

f) Write the significance of plastids in plant cell. **2½**

g) Write a short note on microfilaments. **2½**

h) Discuss G1 and G2 phases of cell cycle. **2½**

4. a) Write the contribution of matthais Jakob Scheilden in the discovery of cell. **2½**

b) Describe structure and function of endoplasmic reticulum. **2½**

c) Write the significance of neurofilaments. **2½**

d) Describe the Telophase & Anaphase in mitotic division. **2½**

OR

e) Draw the diagram well labelled diagram prokaryotic cell. **2½**

f) Discuss the structure and function of lysosome. **2½**

g) Describe the microtubules, with structure. 2½

h) Explain cytokinesis. With diagram. 2½

5. Attempt any ten

a) Write the contribution of Robert Hook. 1

b) Give the function of nerve cell. 1

c) What is cell number? 1

d) Give the function of. Chloroplast. 1

e) Write the subunits of prokaryotic Ribosome. 1

f) What is the role of granules? 1

g) What is the role of α & β tubulin. 1

h) Write the function of Actin filament. 1

i) Write functions of keratins. 1

j) Draw the diagram of metaphase. 1

k) What is meiosis? 1

l) What is cell senescence? 1
