

B.Sc. F.Y. (CBCS Pattern) Sem-I
BIO-01 - Biotechnology Paper-I : Cell & Cell Organelles

P. Pages : 2

Time : Three Hours



GUG/W/22/11562

Max. Marks : 50

1. What is cell? Classify the cell on basis of cell shape, cell size, cell volume and cell number. **10**

OR

- a) Write a note on Nerve cell **2 ½**
- b) Write difference between plant and animal cell. **2 ½**
- c) Draw typical structure of prokaryotic cell **2 ½**
- d) Discuss cell theory & function **2 ½**

2. Explain in details structure of mitochondria. **10**

OR

- a) Write a note bacterial cell wall **2 ½**
- b) Explain fluid mosaic model of plasma membrane **2 ½**
- c) Explain structure and function of Nucleus **2 ½**
- d) Discuss structure of chloroplast **2 ½**

3. Explain structure and function of microtubules? **10**

OR

- a) Write a note on flagellar locomotion **2 ½**
- b) What are intermediate filaments **2 ½**
- c) Explain dynamic instability. **2 ½**
- d) Discuss role of kinesin and dyneins. **2 ½**

4. Explain mitosis in details. **10**

OR

- a) Write a note on cell senescence. **2 ½**
- b) What is cell differentiation. **2 ½**

c) Gives application of cell synchronization. 2 ½

d) Write a note on cell cycle. 2 ½

5. Attempt any ten.

a) Who is father of cell biology. 1

b) Give any two contribution of parkyne. 1

c) Give example of prokaryotic cell. 1

d) What is the function of Ribosome. 1

e) What is function of vacuoles. 1

f) What are different types of protein in plasma membrane. 1

g) What are function of keratin. 1

h) Define cell locomotion? 1

i) What are function of vimentin. 1

j) What is Karyokinesis. 1

k) What is stem cell. 1

l) What is cell division. 1
