

B.Sc. (CBCS Pattern) Semester-II
USBCT-C03 - Biochemistry Paper-I - Cell Biology and Biomolecules

P. Pages : 2

Time : Three Hours



GUG/W/24/11570

Max. Marks : 50

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- Notes : 1. All questions are compulsory.
2. All questions carry equal marks.

1. Discuss in detail the various stages of mitotic cell division. **10**

OR

- a) Write a note on Fluid mosaic model of cell membrane. **2½**
- b) Differentiate prokaryotic cell and eukaryotic cell. **2½**
- c) Discuss the simple diffusion with example. **2½**
- d) Write a note on secondary active transport. **2½**

2. Discuss in detail structure and function of mitochondria. **10**

OR

- a) Write a note on Nucleus. **2½**
- b) Discuss the functions of lysosomes. **2½**
- c) Give the functions of rough endoplasmic reticulum. **2½**
- d) Write a note on chloroplasts. **2½**

3. Discuss the chemical structure of structural polysaccharides. **10**

OR

- a) Write a note on glycosaminoglycans. **2½**
- b) Discuss the phenomenon of mutarotation. **2½**
- c) Draw the chemical structure of lactose and maltose. **2½**
- d) Write a note on epimers with examples. **2½**

4. Discuss in detail structure, properties and nomenclature of saturated and unsaturated fatty acids. **10**

OR

- a) Write a note on Glycerophospholipids. **2½**
- b) Discuss saponification and define Saponification number. **2½**
- c) What are derived lipids? Give examples. **2½**
- d) Draw and discuss the chemical structure of sphingomyelins. **2½**

5. Attempt **any ten** from following.

- a) What is exocytosis? **1**
- b) Define meiosis. **1**
- c) What is pinocytosis? **1**
- d) Who discovered cell wall? **1**
- e) Give one function of peroxisome. **1**
- f) Give one function of golgi bodies. **1**
- g) Draw structure of β – D – Glucose. **1**
- h) Define anomer. **1**
- i) What is amino sugar? **1**
- j) What is iodine number? **1**
- k) Define essential fatty acid. **1**
- l) Define wax. **1**
