

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

P. Pages : 2

Time : Three Hours



GUG/S/25/11570

Max. Marks : 50

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

1. Discuss in detail Fluid mosaic model of cell membrane. **10**

OR

- a) Differentiate prokaryotic cell and eukaryotic cell. **2½**
- b) Discuss the simple diffusion with example. **2½**
- c) Write a note on active transport. **2½**
- d) Enlist the stages of Meiosis. **2½**

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

OR

Write a note on

- a) Mitochondria **2½**
- b) Chloroplast. **2½**
- c) Endoplasmic reticulum. **2½**
- d) Ribosomes. **2½**

3. Define carbohydrates and give the reactions of Glucose with. **10**

- i) Fehling solution.
- ii) Phenyl hydrazine
- iii) Hydroxylamine

OR

- a) Give the classification of carbohydrates. **2½**
- b) Write a note on mutarotation. **2½**
- c) What is disaccharide? Draw the structure of Sucrose. **2½**
- d) Write a note on storage polysaccharide. **2½**

4. What is triacylglycerol? Discuss there following properties. 10
- i) Saponification.
 - ii) Hydrolysis
 - iii) Rancidity
 - iv) Acid value

OR

- a) Give classification of lipid. 2½
- b) What is Glycerophospholipids? Draw structure of Lecithins. 2½
- c) Draw and discuss the structure of sphingomyelins. 2½
- d) Write a note on properties of saturated and unsaturated fatty acids. 2½

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

- a) Give one difference between animal cell and plant cell. 1
- b) Define mitosis. 1
- c) What is exocytosis? 1
- d) Who discovered Golgi apparatus? 1
- e) Give one function of peroxisome. 1
- f) Give one function of lysosome 1
- g) Define anomer. 1
- h) Define epimer. 1
- i) Give one example amino sugar. 1
- j) Define iodine number. 1
- k) Give one example of essential fatty acid. 1
- l) Define saponification value. 1
