

B.Sc. F.Y. (CBCS Pattern) Sem-II
USBCT-C03 : Biochemistry Paper-I : Cell Biology and Biomolecules

P. Pages : 2

Time : Three Hours



GUG/W/22/11570

Max. Marks : 50

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

1. Give an account of fluid mosaic model of the cell membrane. 10

OR

- a) Differentiate between prokaryotic and eukaryotic cell. 2½
- b) Discuss passive transport with example. 2½
- c) Discuss Na – K Pump. 2½
- d) Discuss with diagram metaphase of mitosis. 2½

2. Discuss in detail structure & functions of Mitochondria. 10

OR

- a) Discuss with diagram structure of nucleus. 2½
- b) Describe functions of ribosome. 2½
- c) Describe functions of lysosomes. 2½
- d) Discuss the functions of rough Endoplasmic reticulum. 2½

3. Give the reaction of glucose with 10

- i) Phenyl hydrazide hydrochloride.
- ii) Fehling's reagent.
- iii) Sodium amalgam.
- iv) Hydroxylamine.

OR

- a) Define carbohydrates? How they are classified. 2½
- b) What is reducing sugar? Discuss why sucrose is non reducing sugar. 2½
- c) Differentiate between starch & glycogen. 2½
- d) Discuss the phenomenon of mutarotation. 2½

4. Give detail Classification of lipid. Discuss in details structure & nomenclature of fatty acid with suitable example. 10

OR

Write a note on

- a) Saponification Value. 2½
- b) Acid Value. 2½

c)	Iodine number.	2½
d)	Rancidity.	2½
5.	Attempt any ten of following.	
a)	Define simple diffusion.	1
b)	What is function of centriole in mitosis?	1
c)	What is endocytosis?	1
d)	Give one function of smooth endoplasmic reticulum.	1
e)	Give one function of Golgi bodies.	1
f)	Who discovered chloroplast?	1
g)	Draw ring structure of fructose.	1
h)	What is anomer?	1
i)	Iodine test is useful to detect --	1
j)	Draw structure of cephalins.	1
k)	Draw structure of phosphatidylserine.	1
l)	What is Wax?	1
