

B.Sc. (NEP) Semester-II
BSCBC601 / STUG02BCH001 - Core Group Subject -I : Cell Biology and Biomolecules

P. Pages : 2

Time : Two Hours



GUG/S/25/16773

Max. Marks : 40

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

1. Discuss in detail mitosis. 8

OR

- a) Write a note on Fluid mosaic model of cell membrane. 2
- b) Differentiate prokaryotic cell and eukaryotic cell. 2
- c) Discuss the simple diffusion with example. 2
- d) Write a note on passive transport. 2

2. Discuss in detail structure and function of mitochondria. 8

OR

- a) Write a note on Nucleus. 2
- b) Discuss the functions of lysosomes. 2
- c) Give the functions of Rough Endoplasmic reticulum. 2
- d) Write a note on chloroplasts. 2

3. Discuss in details reactions of Glucose with 8

- i) Fehling solution
- ii) Phenyl hydrazine
- iii) Hydroxylamine
- iv) Sodium amalgam.

OR

- a) Give the classification of carbohydrates. 2
- b) Discuss the mutarotation. 2
- c) Draw the structure of lactose and maltose. 2
- d) Write a note on storage polysaccharide. 2

4. Discuss in detail structure, properties and nomenclature of saturated and unsaturated fatty acids. 8

OR

- a) Write a note on Glycerophospholipids 2
- b) Discuss saponification and define Saponification number 2
- c) Give classification of lipid 2
- d) Draw and discuss the structure of sphingomyelins 2
5. Attempt **any eight** from following.
- a) How animal cell differ from plant cell 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 epimer. 1
- i) What is aminosugar? 1
- j) What is iodine number? 1
- k) Define essential fatty acid 1
- l) Define wax 1
