**KNT/KW/16/5105**

**Bachelor of Science (B.Sc.) Semester–II (C.B.S.) Examination**

**BIOTECHNOLOGY**

**(Cell Constituents & Enzymology)**

**Compulsory Paper–2**

Time : Three Hours] [Maximum Marks : 50

**N.B. :— All** questions are compulsory and carry equal marks.

1. Describe the classification of carbohydrates in detail. 10

**OR**

(a) Describe the structure of starch. 5

(b) Write a note on heteropolysaccharides. 5

2. Write short notes on :

(a) Triglycerides

(b) Saturated and unsaturated fatty acids

(c) Glycerophospholipids

(d) Saponification value. 2½ each

**OR**

(e) Terpenes

(f) Lecithin

(g) Sphingomyelins

(h) Rancidity and acid value. 2½ each

3. Give the nomenclature and classification of enzymes with suitable examples. 10

**OR**

Discuss the concept of Isoenzyme and multienzyme with suitable example. 10

4. Describe the methods of assay of enzymes. 10

**OR**

Derive MM equation and give its transformations. 10

5. Write any **ten** of the following :

(i) Draw a chemical structure of α-D-Glucopyranose.

(ii) What is mutarotation ?

(iii) What is Anomerism ?

(iv) What is the difference between fat and oil ?

(v) Define iodine valve.

(vi) What type of lipids are mostly present in cell membrane ?

(vii) Define Holoenzyme.

(viii) Define allosteric enzyme.

(ix) What is active site ?

(x) Define KM.

(xi) What is catalytic efficiency ?

(xii) Define activation energy. 1×10=10