

Roll No.

Y – 186 / Y– 187

B.Sc. (First Year) EXAMINATION, March/April-2021

BIOCHEMISTRY

Paper – I, II

BIOMOLECULES/BIOPHYSICAL AND BIOCHEMICAL TECHNIQUES

Time : Three Hours

Maximum Marks : 40 + 40 = 80 (For Regular Students)

Minimum Pass Marks : 33%

Maximum Marks : 50 + 50 = 100 (For Private Students)

Minimum Pass Marks : 33%

Note—Attempt all questions.

(Section A)

1. Write the structures of : 13/16
 - (a) α -D glucopyranose
 - (b) Maltose
 - (c) α -D galactose
 - (d) Lactose.
2. Write the structures of : 13/17
 - (a) Palmitic acid
 - (b) Triacylglycerol
 - (c) Linoleic acid
 - (d) Glycerol.
3. Write the structures of : 14/17
 - (a) A zwitterion
 - (b) Valine
 - (c) Phenylalanine
 - (d) A Dipeptide.

(Section B)

4. Write the structure of ATP and give reasons. Why it is called high energy compound ? 13/16
5. What is sedimentation velocity and how it is related to sedimentation coefficient ? Describe the method of determination of molecular weight by sedimentation. 13/17
6. Describe the principle of molecular sieve chromatography. How it is used for separation of mixture of proteins as well as for molecular weight determination ? 14/17

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