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6. Write short note of any **three** of the following :

(a) Liposomes

(b) Polysaccharides

(c) DNA Transcription

(d) Glycolipids (5,5,5)

(1000)

[This question paper contains 4 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 1498 I

Unique Paper Code : 2173522006

Name of the Paper : DSE : Biomolecules – I

Name of the Course : **B.Sc. Prog.**

Semester : III/V

Duration : 2 Hours

Maximum Marks : 60

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt any **FOUR** questions out of **SIX**. All parts of a question should be attempted together.
3. Each question carries **15** marks.

P.T.O.

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1. (a) Explain oxidative rancidity in oils and fats giving an example. Suggest a method to prevent it?

(b) Write the chemical reaction with name of reagents when glucose is treated with NH_2OH .

(c) Discuss the biochemical functions of steroid hormones. (5,5,5)
2. (a) Name of the polysaccharides used in the preparation of starch. Discuss the linkage in starch and draw the structure.

(b) Discuss the replication of DNA.

(c) Define and classify phospholipids with suitable examples and state their functions. (5,5,5)
3. (a) What are sphingolipids? Explain cis-trans behavior to affect lipids.

(b) Discuss the differences between nucleoside and nucleotide with suitable examples.

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- (c) Write the name and structure of two acid products obtained when fructose is treated with concentrated HNO_3 . (5,5,5)
4. (a) What are fats and oils and how they are different from waxes? Explain with suitable examples.

(b) Discuss the various components of nucleic acid in both DNA and RNA.

(c) Draw the structures of sucrose and lactose and explain the differences. (5,5,5)
5. (a) Draw the structure for Guanosine 5'-monophosphate and cytidine 5'-monophosphate.

(b) Discuss Iodine value with suitable example.

(c) Explain the mechanism of Mutarotation in carbohydrates. (5,5,5)

P.T.O.