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6. Write Short Notes on the following: (any three)
(3x5=15)

- a) Mutarotation
- b) Waxes
- c) Denaturation of Proteins
- d) Vitamin C

(1000)

[This question paper contains 4 printed pages.]

Your Roll No.....

आपका अनुक्रमांक.....

Sr. No. of Question Paper : 3318 I

Unique Paper Code : 2174001006

Name of the Paper : **Chemistry of Food Nutrients**

Name of the Course : B.Sc. (H) / B.Sc. Prog.: GE

Semester : I/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.
3. All questions carry equal marks i.e. 15 marks.
4. Attempt all parts of the questions together.

P.T.O.

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1. (a) What are carbohydrates? Discuss their classification giving examples. (5)
(b) What is non-enzymatic browning? Discuss in detail. (5)
(c) Why is starch classified as a homopolysaccharide? Explain its composition, linkages, and structure. (5)
2. (a) What is rancidity of oils and fats? Discuss different types of rancidity. How can these be prevented? (5)
(b) What is Saponification value? Give its significance. (5)
(c) What are phospholipids? Explain giving examples. (5)
3. (a) Discuss the secondary and tertiary structures of proteins. (5)
(b) What are essential and non-essential amino acids? Give two examples of each. (5)
(c) Proteins play an important role in human life. Justify the statement (5)
4. (a) Match the following: (1x5=5)

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- i) THF (f) A form of Vitamin A
ii) Retinal (g) deficiency results in clotting disorder
iii) Vitamin K (h) Coenzyme form of folic acid
iv) Vitamin H (i) stored in liver
v) Vitamin B12 (j) Biotin
- (b) Define vitamins and classify them on the basis of their solubility. (5)
(c) Discuss the effect of pH & temperature on the minerals during the food processing. (5)
5. Differentiate between the following: (with suitable examples) (any three) (3x5=15)
 - a) Reducing & Non-reducing sugars
 - b) Normal Fats & Trans Fats
 - c) Conjugated & derived proteins
 - d) Vitamins & Minerals

P.T.O.