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b) Fats & Oils

c) Globular & Fibrous proteins

d) Microminerals & Macrominerals

6. Write Short Notes on the following: (any three)

(5x3=15)

a) Caramelization of Sugars

b) Rancidity of oils & fats

c) Tertiary structure of protein

d) Fat-soluble vitamins

(1000)

[This question paper contains 4 printed pages.]

Your Roll No.....

आपका अनुक्रमांक.....

Sr. No. of Question Paper : 3021

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 is mutarotation? Why do sugars exhibit mutarotation? Explain with suitable structures. (5)
(b) What are disaccharides? How is sucrose different from maltose? Provide the structures of these two disaccharides. (5)
(c) Discuss the importance and structure of polysaccharides (starch and pectin) in food chemistry. (5)
2. (a) What are lipids? Give their classification. (5)
(b) What is Iodine value? Give its significance. (5)
(c) What are ω -3 & ω -6 Fatty acids. Discuss their significance. (5)
3. (a) What are acidic, basic and neutral amino acids? Give one example of each with structure. (5)
(b) What is denaturation of proteins? Explain with examples. (5)

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- (c) What are proteins and their source. Discuss the biological importance of proteins. (5)
4. (a) Match the following: (1x5=5)
 - i) FAD (a) Serves as an antioxidant
 - ii) Thiamine (b) Coenzyme form of thiamine
 - iii) Niacin (c) deficiency results in Pellagra
 - iv) TPP (d) deficiency causes Beriberi
 - v) Vitamin E (e) Derived from riboflavin
(b) What are Vitamin-B? Discuss their importance. (5)
(c) Minerals play an important role in human life. Justify your answer. (5)
5. Differentiate between the following: (with suitable examples) (any three) (5x3=15)
 - a) Anomers and Epimers

P.T.O.