

[This question paper contains 2 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 1748

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Unique Paper Code : 2202033602

Name of the Paper : FOOD CHEMISTRY – II

Name of the Course : **B.Sc (Hons.) Food Technology (NEP-UGCF)**

Semester : VI, Core

Duration : 3 Hours

Maximum Marks : 90

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Question no. 1 is compulsory. Attempt any **four** from the rest.
3. **All** questions carry equal marks.

1. Justify the following statements (**any three**) : (3×6)

- (a) The colour of anthocyanins is dependent on the nature of substituent groups and pH of the system.
- (b) Pectic enzymes are useful in the clarification of fruit juices.
- (c) New food product development is a continuous evolving process.
- (d) Browning reactions are of different types & both advantageous & disadvantageous.
- (e) Immobilized enzymes are preferred over free enzymes.

2. (a) Explain structure and function of Carotenoids pigment. (9)

(b) Define the term New Product Development. Elaborate its specific objectives to food manufacturing and processing industry. (9)

3. (a) Discuss the pigment present in meat. What happens to pigment on oxygenation & oxidation? (9)

(b) Explain the mechanism of the Maillard reaction in systematic way. (9)

P.T.O.

4. (a) Discuss various types of Amylase enzymes used in baking and brewing industry. (10)
- (b) Describe the principal techniques for preventing enzymatic browning in food. (8)
5. (a) Compare the effect of irradiations, drying and freezing on the protein, fat & colour of preserved food. (12)
- (b) Discuss the stability of chlorophyll during storage. (6)
6. Differentiate between : (6×3)
- (a) Lipase vs Lipoxygenase
- (b) Enzymatic vs non enzymatic browning
- (c) Anthocyanins vs flavonoids
- (d) Chlorophyll vs lycopene
- (e) Flavour of bread vs flavour of fruit
- (f) Sweet vs salty taste
7. Write short notes on : **any three** (3×6)
- (a) Flavour Enhancer
- (b) Ascorbic acid oxidation
- (c) Methods & limitations of enzyme immobilization
- (d) Caramelization
- (e) Quality changes in food during preservation by canning