

8. (a) Define protein and amino acids. Explain the physical, chemical and functional properties of proteins. **8**
- (b) Write short note on natural flavors in food and their retention in processed foods. **7**

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Roll No.

AA-803

M. Tech. EXAMINATION, Dec. 2017

(First Semester)

(B. Scheme) (Main & Re-appear)

FOOD TECHNOLOGY

FT-505

Fundamentals of Food Chemistry

Time : 3 Hours]

[Maximum Marks : 75

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

Unit I

1. (a) Define Food Chemistry. Explain the scope and importance of food chemistry in detail. 7
- (b) Explain the chemistry and stability of water soluble vitamins in detail. 8
2. Write short notes on the following :
 - (a) Water activity and role of water in foods 5
 - (b) Fortification and different methods of fortification 5
 - (c) Chemical properties and macrominerals in food. 5

Unit II

3. Define Browning. Explain the types of browning reactions in detail and their applications in foods. Give proper examples of each. 15

4. (a) Explain modified starches and resistant starches and their applications. 8
- (b) Write a short note on gelatinization and retrogradation of starches. 7

Unit III

5. (a) Write short notes on hydrogenation and interesterification of fats and oils. 8
- (b) Explain the effect of ionizing radiations on oils and fats. 7
6. Write short notes on the following : 15
 - (a) Lipids
 - (b) Fat mimetics
 - (c) Thermal decomposition of fats and oils.

Unit IV

7. Explain enzymes, their properties and the role of enzymes in dairy, starch and sugar, juice, beverage and meat industry. 15