

MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD
SEMESTER END THEORY EXAMINATION

B.Tech. (Food Technology)

Semester : I (New)	[ICAR - Sixth Deans' Committee Syllabus]	Acad. Year : 2025-26
Course No. : FQA-111	Title : Food Chemistry-I	
Credit Hrs. : 3(2+1)		
Day, Date : Monday, 02.02.2026	Time : 10:00 to 12:00 hrs.	Total Marks : 40

Note: Draw neat diagram wherever necessary

SECTION 'A' : Questions with Descriptive Long Answers (Any 4)

Marks

- | | |
|--|---|
| Q.1 Explain the structures of protein in food. | 6 |
| Q.2 Write in detail about the refining of oil. | 6 |
| Q.3 Explain the enzymatic and chemical reactions of carbohydrate. | 6 |
| Q.4 a) State the role of water in food. | 3 |
| b) Write about hydrogenation of oil. | 3 |
| Q.5 a) Give the differences between Lyophilic and Lyophobic solutions. | 3 |
| b) Discuss the uses of lipid in food. | 3 |
| Q.6 a) Write the types of rancidity. | 3 |
| b) Give the classification of carbohydrates. | 3 |

SECTION 'B' : Questions with Descriptive Short Answers (Any 4)

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|---|---|
| Q.7 State the types of water in food. | 2 |
| Q.8 Give the functional properties of proteins. | 2 |
| Q.9 Enlist the antioxidants used in food. | 2 |
| Q.10 Write about the auto-oxidation of lipids. | 2 |
| Q.11 Write about the dispersed systems of foods | 2 |

SECTION 'C' : Objective-type Compulsory Questions

- Q.12 Define the following terms: 4
- | | |
|--------------------------------|------------------------|
| 1) Starch retrogradation | 2) Maillard reaction |
| 3) Moisture sorption isotherms | 4) Interesterification |
- Q.13 Fill in the blanks: 4
- 1) _____ enzyme is responsible for enzymic browning.
 - 2) Lipoproteins are proteins, complexed with _____ and are found in cells and the blood stream.
 - 3) _____ can be defined as biological polymers that catalyse biochemical reactions.
 - 4) Sugars with a free aldehyde and a ketone group, are known as _____.
 - 5) _____ is an oxidation by direct combination with Oxygen at ordinary temperatures.
 - 6) _____ is any mixture of liquids that do not normally mix together, such as oil and water.
 - 7) The storage polysaccharide of animal tissues is _____.
 - 8) _____ indicates the degree of unsaturation of a fat or oil.

