

REV-01  
BFST/13/18

2023/01

**B.Sc. FOOD SCIENCE & TECHNOLOGY  
FIRST SEMESTER  
FOOD CHEMISTRY  
BFST-102**

**SET  
A**

[USE OMR SHEET FOR OBJECTIVE PART]

Duration: 1hr. 30 mins.

Full Marks: 35

Time: 15 mins.

**(Objective)**

Marks: 10

*Choose the correct answer from the following:*

*1×10=10*

- Osteoporosis means:
  - Porous bones
  - Long bones
  - Irregular bones
  - Flat bones
- Range of pH scale is:
  - 0 to 10
  - 7 to 10
  - 0 to 14
  - 1 to 14
- Number of Carbon atoms present in fructose is:
  - 4
  - 5
  - 6
  - 7
- Which of the following is/are the mode of non-enzymatic browning in food?
  - Caramelization
  - Maillard reaction
  - Ascorbic acid oxidation
  - All of these
- Which of the following is the scientific name of Vitamin K?
  - Phytonadione
  - Ascorbic acid
  - Tocopherol
  - Pantothenic acid
- Lipids are soluble in..... solvents.
  - Polar
  - Non-polar
  - Water
  - None of these
- Deficiency of Iron mainly causes:
  - Loss of appetite
  - Muscle disorder
  - Goiter
  - Nausea
- The diet which contains the required essential nutrients in the right proportions is:
  - Opsin diet
  - Insoluble diet
  - Soluble diet
  - Balanced diet
- A Maillard reaction is an example of the browning of:
  - Protein
  - Starch
  - Sugar
  - Protein and Sugar

10. The water activity( $a_w$ ) of pure water is:

a. 1.0  
c. 0.71

b. 0.92  
d. 0.54

-- --- --

**(Descriptive)**

Time : 1 hr. 15 mins.

Marks : 25

[ Answer question no.1 & any two (2) from the rest ]

- |   |          |
|---|----------|
| 1. Define Food. Describe the importance of food chemistry in analysis and processing of food.   | 1+4=5    |
| 2. Elaborate the mode of action of enzymes. Discuss different factors affecting the enzyme activities.  | 5+5=10   |
| 3. What do you mean by water activity and moisture content? Explain any four properties of water.   | 2+2+6=10 |
| 4. Classify proteins based on chemical nature and solubility. What are the characteristics of Denaturation? Write down the structure of two sulphur containing amino acids. | 5+3+2=10 |
| 5. What are vitamins? Differentiate between fat soluble vitamins and water-soluble vitamins.  | 3+7=10   |

= = \*\*\* = =