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MVP-001

**M. SC. IN FOOD SAFETY AND
QUALITY MANAGEMENT / POST
GRADUATE DIPLOMA IN FOOD
SAFETY AND QUALITY
MANAGEMENT
(MSCSFQM/PGDFSQM)
Term-End Examination
June, 2024**

**MVP-001 : FOOD FUNDAMENTALS AND
CHEMISTRY**

Time : 3 Hours

Maximum Marks : 100

Note : (i) Attempt any **five** questions.

(ii) All questions carry equal marks.

1. (a) Write in brief about the following : $3 \times 5 = 15$
- (i) Organic Food
 - (ii) Food Security
 - (iii) Egg Quality
 - (iv) Genetically Modified Food
 - (v) Hardness of Water

P. T. O.

- (b) Write the function of lipids and protein in body. 5
2. (a) How does preslaughter handling of animals and birds affect the safety and quality of meat ? 12
- (b) Write about the steps of poultry processing and packaging. 8
3. (a) Differentiate between the following :
2×5=10
- (i) Kharif and Rabi crops
- (ii) Restructured Meat and Meat Analogues
- (iii) Cottage Cheese and Cheddar Cheese
- (iv) Carametization and Maillard Browning
- (v) Peroxide Value and Acid Value
- (b) Name *four* types of tea and state their characteristics. 4
- (c) Write the steps of black tea processing. 6
4. (a) Explain the properties of proteins. 10
- (b) How are polysaccharides used as ingredients in food formulations ? State their technical and nutritive importance. 10

5. (a) What is meant by Water Activity ? How is it measured ? How is food categorized on the basis of water activity or moisture content ? 12
- (b) Name few natural food colourants. Give their sources and significance for health. 8
6. (a) Discuss the physiological functions of : 12
- (i) Vitamin B₁
- (ii) Folic acid
- (iii) Calcium
- (b) What is meant by Food Fortification ? What considerations are kept in mind during selection of foods for fortification and fortifying agent ? 8
7. (a) Discuss the importance of gas chromatography in food analysis. Draw schematic diagram of a GC and state parameters involved during analysis. 10
- (b) Discuss the steps of effluent treatment in food industry. 10

8. Write short notes on the following : $5 \times 4 = 20$

- (a) Pulsed electric field
- (b) Glass as packaging material
- (c) Intelligent packaging systems
- (d) Descriptive tests for sensory evaluation