

**POST GRADUATE DIPLOMA IN FOOD SAFETY
AND QUALITY MANAGEMENT (PGDFSQM)**

Term-End Examination

December, 2021

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

Time : 3 hours

Maximum Marks : 100

Note : Attempt **five** questions in all. All questions carry equal marks.

1. (a) Discuss about any three healthy or 'super foods'. 12
- (b) Explain the role of water activity on the shelf life of food. 8
2. (a) How is the quality of an egg determined ? 4
- (b) How are starch and non-starch polysaccharides used in the food industry ? 8
- (c) Differentiate between Durable and Perishable food products. 8

3. (a) Describe various techniques for active packaging of foods. Give five examples. 10
- (b) Describe various processed meat products. 10
4. (a) Discuss about the various aspects of aseptic packaging systems. 10
- (b) Explain the various components of Atomic absorption spectrophotometer with the help of a diagram. 10
5. (a) State the source, physiological role and food application of any two macrominerals and two trace elements. 12
- (b) Define rancidity. How is it determined ? Give its effect on food quality. 8
6. Differentiate between any **four** of the following : $4 \times 5 = 20$
- (a) Hedonic rating scale and Food action rating scale
- (b) Iodine number and K-value
- (c) Pasteurization and Sterilization
- (d) HPLC and GC
- (e) Class I and Class II preservatives

7. (a) Describe the food applications of Protein concentrates, Isolates and Hydrolysates. 6
- (b) What are Antioxidants ? List the commonly used antioxidants in fats and oils. 4
- (c) Describe the food applications of any five water soluble vitamins. 10
8. (a) How are enzymes used in food industry ? 8
- (b) How are immobilized enzymes useful ? 4
- (c) Which natural colourants are used in food industry ? State their sources and stability concerns. 8
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