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MVP-001

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

Term-End Examination

June, 2019

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

Time : 3 Hours

Maximum Marks : 100

*Note : Attempt any five questions. All questions
carry equal marks.*

1. (A) Define the following : 10×1=10
- (a) Sampling plan
 - (b) Roughage
 - (c) Nutrition
 - (d) Smoke point
 - (e) Titration
 - (f) Beri-beri
 - (g) Amphoteric
 - (h) Water activity
 - (i) Lairage
 - (j) Acidic food

(A-4) P. T. O.

(B) Fill in the blanks :

10×1=10

- (a) Energy value of food is measured in
- (b) is used for curing of meat.
- (c) is used to impart yellow colour in butter.
- (d) Milk is a type of emulsion.
- (e) is an example of a complex lipid.
- (f) Solvent used for cryogenic freezing is
- (g) Peptides containing 3-10 amino acid residues are called
- (h) HACCP stands for
- (i) Antimicrobial preservative used in packing films is
- (j) is used as glaze for candies/gums.

2. (A) Differentiate between the following :

2×5=10

- (a) LTLT and HTST processing
- (b) MUFA and PUFA
- (c) BOD and COD

- (d) Detection threshold and recognition threshold
- (e) RM value and Polenske value
- (B) Elaborate the various methods employed to determine moisture in a given sample. 10
3. (a) Draw a schematic representation of an adsorption and desorption isotherm. 5
- (b) What are the various detectors used in Gas Chromatography ? 5
- (c) What are the materials used for preparing edible films ? 10
4. (A) Give the importance of the following :
- 2×5=10
- (i) Food analysis
- (ii) Food packaging
- (B) What are CFB boxes ? How are they made ? Indicate their advantages and disadvantages. 2+2+6=10
5. (a) Explain the secondary treatments applied for waste water treatment. 10
- (b) What is the principle of MAP ? Give the role of different gases flushed in the pack.

5+5=10

6. (a) What are nutritive and non-nutritive sweetness ? Explain. 5
- (b) What are the functional properties of protein used during food processing ? 5
- (c) Give classification of protein on the basis of structural organization. 10
7. (a) Write the principle of working of AAS and thermogravimetric analyzer. 5
- (b) What are the necessary steps to be taken to maintain quality and wholesomeness of processed fish ? 5
- (c) Explain the following terms in 5-6 lines each : 5×2=10
- (i) Mutarotation
 - (ii) Crystallization
 - (iii) Natural colourant
 - (iv) Water hardness
 - (v) Inversion of sugar