

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

Term-End Examination

June, 2018

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

Time : 3 hours

Maximum Marks : 100

- Note :**
- (i) *Attempt any five questions.*
 - (ii) *All questions carry equal marks.*

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1. (a) Differentiate between : **2x5=10**
- (i) Water and fat soluble vitamin's and their stability
 - (ii) Enzymatic and non-enzymatic browning
 - (iii) Reducing and non-reducing sugars
 - (iv) Bulk and Acceptance sampling
 - (v) Oligosaccharides and Polysaccharides
- (b) Give the chemical composition of legumes and describe the antinutritional factors present in them. **5**
- (c) Enumerate the various groups of meat products with examples for each. **5**
2. (a) What are sorption isotherms ? Enlist their significance. **6**
- (b) What is the effect of cooking and storage on starchy components of food ? **5**
- (c) Describe the application of AAS in food analysis. **4**
- (d) Describe the function of lipids and proteins in the body. **5**

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| 3. | (a) | What is the function of digestible and non-digestible carbohydrates in diet ? | 8 |
| | (b) | Describe the components and application of HPLC. | 12 |
| 4. | (a) | Describe ways to measure physical properties of foods. | 10 |
| | (b) | What is meant by sample accountability ? Describe its importance. | 10 |
| 5. | (a) | Describe the biological parameters to measure water quality. | 6 |
| | (b) | Elaborate the various detectors for gas chromatography. | 12 |
| | (c) | What are functional foods ? | 2 |
| 6. | (a) | Describe the various techniques for food preservation. | 10 |
| | (b) | What are Edible films and coatings ? Describe their materials and requirements. | 10 |
| 7. | | Write in brief about the following techniques : | 20 |
| | (a) | MAP | |
| | (b) | Cryogenic freezing | |
| | (c) | Pulsed electric field processing | |
| | (d) | Retort packaging | |
| | (e) | Biodegradable plastics | |
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