

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

**Term-End Examination**

**June, 2011**

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

*Time : 3 hours*

*Maximum Marks : 100*

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

1. (a) Give one word answer : **15x1=15**
- (i) A combination of nutrition and pharmaceutical which has the potential for promoting health and preventing diseases.
  - (ii) Foods prepared from plants or animals whose genome is altered through genetic engineering.
  - (iii) The amino acid deficient in pulses.
  - (iv) Name of one nonedible oil seed crop.
  - (v) Name of vegetable oil rich in omega - 3 fatty acid.
  - (vi) The botanical name of tea is .....
  - (vii) The example of nonstarchy polysaccharide.
  - (viii) Name the chemical property of fat indicating its unsaturation.

- (ix) Name the colour used in butter and cheese.
  - (x) The compound responsible for flatulence factor of soyabean.
  - (xi) The name of corn protein.
  - (xii) The pigment present in meat.
  - (xiii) The antinutritional factor present in cottonseed.
  - (xiv) The w/z solution used in  $I_2$  value estimation is a source of \_\_\_\_\_.
  - (xv) Sandwich of two or more packaging material.
- (b) Write *full form* for the following : **5x1=5**
- (i) AAS
  - (ii) PET
  - (iii) EAN
  - (iv) FFS
  - (v) IQB
2. Define the terms : **4x5=20**
- (a) New Food Product Development (NPD)
  - (b) Organic food
  - (c) Cottage cheese
  - (d) Maillard Browning
3. (a) Illustrate the food chain. **7**
- (b) What is primary and secondary processing in cereals ? **8**
- (c) What are the functional properties of eggs ? **5**

4. (a) What are the limitations in use of soyabean as a food legume ? 5
- (b) What are sausages ? Give examples. 8
- (c) What are the different methods of preservation of eggs ? 7
5. (a) What are Functional foods ? 5
- (b) What is Sorption Isotherm ? Discuss its significance in food industry. 5+5=10
- (c) Discuss the role of enzyme in brewing industry. 5
6. (a) What are antioxidants ? Discuss their mode of action in food. 2+3=5
- (b) What is the significance of ash content in foods ? Discuss briefly dry and wet ashing. 3+4=7
- (c) Define chromatography technique. Write the applications of gas chromatography. 4+4=8
7. (a) Comment on modified atmosphere packaging. 5
- (b) Explain five important properties of paper. 5
- (c) What are the essential labelling requirements on a food package under Indian laws ? 10