

**POST GRADUATION DIPLOMA IN  
FOOD SCIENCE AND TECHNOLOGY**

**Term-End Examination**

**December, 2011**

**MFT-009 : FRUIT AND VEGETABLE  
TECHNOLOGY**

*Time : 3 hours*

*Maximum Marks : 70*

**Note :** *Answer Any Five questions. All questions carry equal marks.*

**1. Fill in the blanks in the followings : 7x2=14**

- (a) The major pigment in leafy vegetables is \_\_\_\_\_, where as in ripe Tomatoes the major pigment is \_\_\_\_\_.
- (b) India stands \_\_\_\_\_ in mango Production among different countries in the world, whereas it is \_\_\_\_\_ in banana production.
- (c) \_\_\_\_\_ and \_\_\_\_\_ are the two socio economic factors that affect Post harvest losses.
- (d) \_\_\_\_\_ is used as maturity index in papaya, where as \_\_\_\_\_ is a maturity index for water melon.

- (e) In general pasteurization of juice is done at \_\_\_\_\_ °C, where as canning is done at \_\_\_\_\_ °C.
- (f) \_\_\_\_\_ is an example of low acid fruit, where as \_\_\_\_\_ is a high acid fruit.
- (g) TSS of juice is approximately \_\_\_\_\_ °B, where as TSS of squash is \_\_\_\_\_ °B.

2. Write **TRUE** or **FALSE** for the followings. **14x1=14**

- (a) All the fruits should be stored below 0°C for extended storage.
- (b) Amla is rich source of vitamin D
- (c) Degreening in oranges is done by ethylene.
- (d) Approximate shelf life for minimally processed products is 6 months.
- (e) B-carotene is a Precursor for Vitamin A.
- (f) Water activity of fresh fruits is around 0.75.
- (g) Tomatoes are grown only in rainy season.
- (h) Alternate bearing is a problem in Apples.
- (i) Drying and dehydration are one and same terms.
- (j) Soft nose is a common disorder in mangoes.
- (k) In Immersion freezing refrigerant does not change its physical state.
- (l) Frozen products can be thawed by keeping in refrigerator.
- (m) Clamp is a storage structure used for potatoes.
- (n) Nuts are rich source of carbohydrates

3. Define/describe followings in one or two sentence (s) 7x2=14

- (a) Nutrition
- (b) Prepackaging
- (c) Blanching
- (d) Grading
- (e) Climacteric
- (f) Osmotic dehydration
- (g) Ohmic heating

4. Differentiate between the followings : 4x3.5=14

- (a) Slow and fast freezing
- (b) Tomato paste and puree
- (c) Vacuum precooling and hydro cooling.
- (d) Water activity and water content

5. Write short note on the followings in 6-8 sentences : 4x3.5=14

- (a) Maturity Indices
- (b) Canning
- (c) Freeze drying
- (d) Storage disorder

6. Answer the followings : **4x3.5=14**

- (a) Mention various methods used for preservation of fruit juices.
- (b) What are the causes of high post harvest losses ?
- (c) Write in short about any four value added fruit and vegetable products.
- (d) Define various stages in drying of fruits and vegetables.

7. Answer the followings in detail : **2x7=14**

- (a) What is minimal processing ? Describe factors affecting the quality of minimal processed by-products.
  - (b) How sugar helps in preservation of fruits and vegetables ? Give details of farm preparation with a neat flow diagram.
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