

**POST GRADUATION DIPLOMA IN FOOD
SCIENCE AND TECHNOLOGY (PGDFT)**

Term-End Examination

December, 2015

**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 following : 7x2=14
- (a) The fruits which continue to ripen even after harvest are termed as _____ fruits while others are _____ fruits.
 - (b) Grapes are rich in _____ acid while citrus fruits in _____ acid.
 - (c) The term "Appertizing" is used for _____ of fruits, while "case hardening" is related to _____ of fruits.
 - (d) pH value for formation of jelly is _____ and sugar concentration _____.
 - (e) For low sugar content, potatoes should be stored at _____ °C, while for long term storage at _____ °C.
 - (f) Colour of jamun is due to _____ pigments, while in tomato it is _____.
 - (g) Aril browning is physiological disorder of _____.

2. Write **true** or **false** for the following : **14x1=14**

- (a) Pasteurization of juices is done at 90°C for 30 min.
- (b) The normal atmospheric carbon dioxide concentration is 0.03%.
- (c) Breaker stage is the maturity stage of tomato.
- (d) Mostly vegetables are alkaline in nature.
- (e) Refractometer is used for measurement of salt concentration in pickles.
- (f) The extent of post harvest losses is same for all the fruit crops.
- (g) Acidity of jelly is around 1%.
- (h) Removal of field heat is called pre-cooling.
- (i) All fruits and vegetables can be hydro-cooled.
- (j) Condensation is involved in sun drying of vegetables.
- (k) Minimally processed fruits should be stored at room temperature.
- (l) Onions and apples can be stored in same cold storage.
- (m) High value fruits and vegetables are subjected to freeze drying.
- (n) Ethylene is a ripening hormone.

3. Define/describe briefly the following : **7x2=14**

- (a) Intermediate moisture food
- (b) Minimal processing
- (c) Pre-cooling
- (d) Marmalade
- (e) Brine solution
- (f) Individual quick freezing (IQF)
- (g) Blanching

4. Differentiate between the following : **4x3.5=14**
- (a) Grading and sorting
 - (b) Pasteurization and sterilization
 - (c) Cooking and blanching
 - (d) Bruising and rotting
5. Write short notes on the following : **4x3.5=14**
- (a) Consumer packaging
 - (b) Advantages of microwave processing
 - (c) Advantages of dehydration of fruits and vegetables.
 - (d) Rural industrialization
6. Answer the following in one paragraph. **4x3.5=14**
- (a) Give the process chart for manufacture of apple jam.
 - (b) Specifications of RTS, nectar and squashes.
 - (c) Use of ethrel for ripening of fruits.
 - (d) Evaporative cool chambers for short term storage.
7. Answer the following in detail. **2x7=14**
- (a) How will you manage post harvest diseases of fruits and vegetable ?
 - (b) How will you process tomato into puree and sauce ? What are the various factors responsible for spoilage of these products ?
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