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

Term-End Examination

June, 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) Cider is fermented product of _____ , while kanji is prepared from _____ .
 - (b) Amongst grapes and mangoes, hydro-cooling is appropriate for _____ and air-cooling for _____ .
 - (c) _____ processed fruits and vegetables retain while _____ processed show altered flavour and taste.
 - (d) The storage environment with changing gaseous concentrations is referred as _____ atmosphere storage, while with fairly constant concentrations is referred as _____ atmosphere.
 - (e) Amongst sapota and grape, climacteric fruit is _____ while non-climacteric is _____ .

- (f) Chilling injury in banana occurs at storage temperature below _____ °C, while for pomegranate, below _____ °C.
- (g) Minimum fruit content and TSS of jelly should be _____ % and _____ °B respectively.

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

- (a) Strawberry can be packed in 5 kg capacity packages for bulk transport.
- (b) Dehydrofreezing is dehydration of frozen fruits and vegetables.
- (c) Inactivation of enzymes is not required in freeze drying.
- (d) Sweet potato wrapped in aluminium foil can be processed in microwave oven.
- (e) The moisture content of dehydrated potato slices is 15%.
- (f) Pasteurization of juices is done at 90°C for 30 min.
- (g) Sugar content in squash is about 20-25%.
- (h) Bitter pit is physiological disorder of apple.
- (i) The maximum permissible limit of SO₂ in squash is 350 ppm.
- (j) Fruit products with low water activity show higher shelf life.
- (k) Bael is rich source of vitamin B₁₂.
- (l) Onion requires high humidity during curing.
- (m) Moisture content in intermediate moisture fruits is 20-40%.
- (n) Mango show chilling injury at 12°C storage temperature.

3. Define/describe briefly the following : **7x2=14**
- (a) Chilling injury
 - (b) Modified atmosphere
 - (c) Value addition
 - (d) Maturity indices
 - (e) Ohmic heating
 - (f) Pasteurization
 - (g) Individual quick freezing
4. Differentiate between the following : **4x3.5=14**
- (a) Disease and disorder
 - (b) Sorting and grading
 - (c) Growth and development
 - (d) Active and conventional packaging
5. Write short notes on the following : **4x3.5=14**
- (a) Status of fruit processing industry in India.
 - (b) Curing of potato
 - (c) Cleaning of underground vegetables.
 - (d) Advantages of grading fruits and vegetables.
6. Answer the following in **one** paragraph : **4x3.5=14**
- (a) Hydro-cooling of fruits and vegetables
 - (b) Water activity and its role in shelf life.
 - (c) Nutritional importance of fruits and vegetables.
 - (d) Waxing in edible fruits.
7. (a) Define the minimal processing, enlist the factors which affect the quality of processed products. Explain the role of enzymes in detail. **2x7=14**
- (b) Describe the role of various pre-harvest factors which influence the post harvest quality and losses of fruits and vegetables.