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**GANDHI INSTITUTE OF ENGINEERING AND TECHNOLOGY UNIVERSITY,
ODISHA, GUNUPUR
(GIET UNIVERSITY)**

**B. Sc. (Ag.)(Sixth Semester) Examinations, April – 2025
HORT-325 - (Post-Harvest Management and Value-addition of
Horticultural Crops)**

Time: 2 hrs

Maximum : 50 Marks

The figures in the right hand margin indicate marks.

PART – A

Q.1. Fill in the blanks with suitable word / figure.

(0.5 x 10 = 5 Marks)

- _____ is the process of lowering the temperature of freshly harvested fruits and vegetables to prevent spoilage.
- _____ is the method used to sort and categorize fruits and vegetables based on their size, shape, and quality.
- The process of preserving fruits and vegetables by submerging them in a solution of vinegar and salt is called _____.
- _____ is a method of preserving food by removing moisture to prevent microbial growth and spoilage.
- _____ is the treatment of fruits with a thin layer of edible coating to reduce water loss and extend shelf life.
- _____ is the process of storing horticultural produce at low temperatures to extend its shelf life.
- Blanching involves placing fruits or vegetables in _____ water for a short time to preserve color and texture.
- _____ is a common method used to increase the shelf life of fruits and vegetables by sealing them in airtight containers and heating them.
- _____ helps to reduce moisture loss and prevent the growth of mould or fungi during storage by controlling the humidity.
- _____ is a type of value addition where fruits and vegetables are converted into products like jams, sauces, and juices.

Q. 2. Define (or) Explain the following in one or two sentences.

(1 x 5 = 5 Marks)

- Canning
- Sterilization
- Blanching
- Preservatives
- Pasteurization

Q3. Match the following**(0.5 x 10 = 5 Marks)****Column – A****Column – B**

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|-----------------------|--|
| (a) Cold Storage | (i) Prevents damage during transportation. |
| (b) Grading | (ii) Removes moisture to increase product longevity. |
| (c) Ripening chamber | (iii) Extends shelf-life of fresh produce |
| (d) Packaging | (iv) Pre-treatment to maintain colour and texture. |
| (e) Processing | (v) Ensures timely delivery to the market |
| (f) Blanching | (vi) Guidelines for product quality and safety. |
| (g) Drying | (vii) Sorting based on size, quality or ripeness |
| (h) Transport | (viii) Creating value-added products like juices and jams. |
| (i) Quality standards | (ix) Converts by-products into compost or animal feed. |
| (j) Waste utilization | (x) Uniform ripening using controlled conditions. |

Q4. Write True or False against each statement**(0.5 x 10 = 5 Marks)**

- Fruits and vegetables should be washed after harvesting.
- Modified atmosphere packaging helps in keeping fruits fresh for a longer time.
- Blanching means drying the fruits in sunlight.
- Pickles are an example of value-added products.
- Grading helps in separating good quality produce from damaged ones.
- Canning is used to make fruits and vegetables last longer.
- Waxing is done to make fruits look shiny and stay fresh.
- Tomatoes cannot be used to make ketchup.
- Dehydration removes water from fruits and vegetables.
- Good packaging helps in protecting fruits and vegetables during transport.

PART – B**Attempt ANY FIVE questions. All question carries equal marks (6 x 5 = 30 Marks)**

- What do you mean by the term “value-addition” of fruits and vegetables. Mention different value-added products prepared from different fruits and vegetables which can fetch high economic return.
- Define post-harvest management. What are the different post-harvest techniques adopted to increase the shelf-life of horticultural produce?
- State the differences between “drying” and “dehydration” techniques. Briefly enumerate the types of drying and dehydration techniques with special reference to structures.
- Define preservation. Mention the principles of preservation. State the importance of preservation in food industry.
- Mention the different value-added products prepared from tomato. With the help of a flowchart, explain the process of preparation of tomato ketchup.
- Explain the pre-harvest factors affecting the post-harvest life of fruits and vegetables.

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