

Enrollment No.....



Faculty of Agriculture
End Sem Examination May-2024

AG3CO46

Post-Harvest Management & Values addition of Fruits
& Vegetables

Programme: B.Sc. (Hons.) Branch/Specialisation: Agriculture

Duration: 3 Hrs.**Maximum Marks: 50**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d. Assume suitable data if necessary. Notations and symbols have their usual meaning.

- Q.1 i. Which one of the following instruments is used for the measurement of TSS? **1**
 (a) Thermometer (b) Refractometer
 (c) Barometer (d) Dendrometer
- ii. What percentage of Fruits and Vegetables are typically wasted due to postharvest losses? **1**
 (a) 10-20% (b) 25-40% (c) 50-60% (d) 70-80%
- iii. Name the factors which are responsible for spoilage of food? **1**
 (a) Micro- organisms (b) Enzymes
 (c) Both (a) and (b) (d) None of these
- iv. Which hormone is commonly associated with the ripening process of fruits? **1**
 (a) Insulin (b) Ethylene
 (c) Adrenaline (d) Melatonin
- v. Which term defines the action of reducing the temperature of harvested produce immediately after harvest? **1**
 (a) Drying (b) Pre-cooling
 (c) Cooling (d) De-greening
- vi. What does ZECC stand for? **1**
 (a) Zero Emission Carbon Capture
 (b) Zero Energy Cool Chamber
 (c) Zonal Environmental Control Center
 (d) Zenith Energy Conservation Committee

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- vii. Sodium benzoate works on which principle: **1**
 (a) Check the growth of yeast
 (b) Kill the yeast
 (c) Both (a) and (b)
 (d) None of these
- viii. Jam typically contains an acid content within the range of: **1**
 (a) 0.5-0.6% (b) 1.5-2.5% (c) 0.8-1.0% (d) 2.5-3.5%
- ix. Which is not a method of storage? **1**
 (a) Hypobaric (b) ZECC
 (c) Cold Storage (d) Blanching
- x. Foggy jelly is due to _____. **1**
 (a) Use of non-clarified juice or extract
 (b) Use of immature fruits
 (c) Due to over cooking
 (d) All of these
- Q.2 i. Write down the definition of post-harvest management. **1**
 ii. Why is post-harvest management important in agricultural practices? **2**
 iii. Describe the technologies for minimizing the post-harvest losses. **5**
- OR iv. Describe in detail about various factors contributing to post-harvest losses. **5**
- Q.3 i. Define Pre-Cooling. **1**
 ii. What are the pre-harvest factors that affects the post-harvest quality? **3**
 iii. What is maturity of fruits? Describe its various type. **4**
- OR iv. Define respiration. What are the factors that affect respiration rate in fruits and vegetables? **4**
- Q.4 i. What are the three principles of food preservation? **2**
 ii. Describe various storage methods of fruits and vegetable items. **6**
- OR iii. Differentiate between Jam and Jelly. **6**
- Q.5 i. Describe Intermediate moisture food with examples. **2**
 ii. Discuss in brief about problems in Jelly production. **2**
 iii. Write in detail about fermented and non-fermented beverages with examples. **4**

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- OR iv. Define Jelly. Make technological flow sheet for processing of Jelly. **4**
- Q.6 Attempt any two:
- i. What is drying of fruits and vegetables? Discuss in brief about various methods of drying. **4**
- ii. Describe in detail about canning. **4**
- iii. Define packaging and packaging materials with examples. **4**

Marking Scheme

Post-Harvest Management & Values addition of Fruits & Vegetables (T) - AG3CO46 (T)

Q.1	i)	b. Refractometer	1
	ii)	b. 25-40%	1
	iii)	c. Both	1
	iv)	b. Ethylene	1
	v)	b. Pre-cooling	1
	vi)	a. Zero Energy Cool Chamber	1
	vii)	a. Check the growth of yeast	1
	viii)	a. 0.5-0.6%	1
	ix)	d. Blanching	1
	x)	d. All of these	
Q.2	i	Definition	1
	ii	Post harvest management important	2
	iii	Technologies for minimizing the post-harvest loss	5
	iv	Factors contributing , post-harvest losses	5
Q.3	i	Pre -Cooling	1
	ii	Pre-harvest factors that affects the post -harvast	3
	iii	Fruits 1 Marks , various type 3 Marks	4
	iv	Respirations 1 Marks, Factors 3 Marks	4
Q.4	i	Three Principles of food preservation	2
	ii	Storage methods of fruits and vegetable	6
	iii	Jam 3 Marks ,Jelly 3 Marks	6
Q.5	i	Moisture food 1.5 Marks ,example 0.5Marks	2
	ii	Problems in jelly production	2
	iii	fermented 2 Marks .non-fermented	4
	Or	Jelly 1 Marks , flow sheet 3 Marks	4

Q.6	i	Fruits and vegetable 1Marks , methods of drying 3 Marks	4
	ii	Details about canning	4
	iii	Packaging 1 Marks, Materials With example 3 Marks	4