

Enrollment No.....



Faculty of Agriculture
End Sem (Even) Examination May-2022
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.

- Q.1 i. The main environmental factor in determining the rate of transpiration is: 1
(a) Temperature (b) Oxygen
(c) Carbon dioxide (d) Relative humidity
- ii. Storage life of fruits and vegetables is extended by keeping them in an atmosphere of: 1
(a) High in CO₂ & low in oxygen
(b) High in oxygen & low in CO₂
(c) At low temperature
(d) At high relative humidity
- iii. Name the factors which are responsible for spoilage of food? 1
(a) Micro- organisms (b) Physical damage
(c) Enzymes (d) All of these
- iv. The enzyme which is responsible for browning of fruit and vegetables is: 1
(a) Lipo-oxidase (b) Polyphenol-oxidase
(c) Amylase (d) Protease
- v. Which is the cheapest preservation method of fruits and vegetables? 1
(a) Canning (b) Freezing (c) Drying (d) Fermentation
- vi. Hypobaric storage is also known as: 1
(a) CA storage (b) MA storage
(c) Low pressure storage (d) Cold storage

P.T.O.

[2]

- vii. Sparkling product prepared from fruit juice is: **1**
 (a) Squash (b) Jam (c) Nector (d) Cordial
- viii. Processed product in which fruit pieces are suspended is called as: **1**
 (a) Jam (b) Jelly (c) Cordial (d) Marmalade
- ix. Processing temperature for canning of vegetables is: **1**
 (a) 80 - 85 °C (b) 100 - 115 °C
 (c) 110 - 115 °C (d) 115 - 121 °C
- x. The process of removal of air from cans is known as: **1**
 (a) Sealing (b) Processing
 (c) Exhausting (d) None of these
- Q.2 i. Define post-harvest management. **1**
 ii. Enlist several pre-harvest and post-harvest factors that affect the quality of fruits and vegetables. **2**
 iii. Describe the importance of post-harvest processing of fruits and vegetables. **5**
- OR iv. Write down the causes of post-harvest losses of fruits and vegetables. **5**
- Q.3 i. Define maturity. **1**
 ii. Define climacteric and non-climacteric fruits. **3**
 iii. Write down the aspects involved in respiration of fruits and vegetables. **4**
- OR iv. Define respiration and factors affecting respiration in fruits and vegetables. **4**
- Q.4 i. Define hypobaric storage. Who discovered it? **2**
 ii. Describe Zero Energy Cool Chamber (ZECC) storage. Write down the principle involved and construction of zero energy cool chamber. **6**
- OR iii. Write in detail the principle and methods of preservation of fruits and vegetables. **6**
- Q.5 i. Differentiate between jam and jelly. **2**
 ii. Define marmalade and nector. **2**
 iii. Define jelly. Describe method of preparation and problems in jelly production. **4**

[3]

- OR iv. Define jam. Describe method of preparation and problems in jam production. **4**
- Q.6 Attempt any two:
- i. Define packaging and describe types of packaging. **4**
 ii. Define drying and dehydration. Write down the objectives, principles and mechanism of dehydration. **4**
 iii. Enlist different tomato products and describe the preparation of tomato ketchup. **4**

Marking Scheme

AG3CO46 Post - Harvest Management & Values Addition of Fruits & Vegetables

Q.1	i.	The main environmental factor in determining the rate of transpiration is:		1
		(d) Relative humidity		
	ii.	Storage life of fruits and vegetables is extended by keeping them in an atmosphere of:		1
		(a) High in CO ₂ & low in oxygen		
	iii.	Name the factors which are responsible for spoilage of food?		1
		(d) All of these		
	iv.	The enzyme which is responsible for browning of fruit and vegetables is:		1
		(b) Polyphenol-oxidase		
	v.	Which is the cheapest preservation method of fruits and vegetables?		1
		(c) Drying		
Q.2	vi.	Hypobaric storage is also known as:		1
		(c) Low pressure storage		
	vii.	Sparkling product prepared from fruit juice is:		1
		(d) Cordial		
	viii.	Processed product in which fruit pieces are suspended is called as:		1
		(d) Marmalade		
	ix.	Processing temperature for canning of vegetables is:		1
		(d) 115 - 121 °C		
	x.	The process of removal of air from cans is known as:		1
		(c) Exhausting		
	i.	Define post-harvest management.	1 Mark	1
	ii.	Enlist several pre-harvest	1 Mark	2
		Post-harvest factors that affect the quality of fruits and vegetables	1 Mark	
	iii.	Describe the importance of post-harvest processing of fruits		5
			2.5 Marks	
		The importance of post-harvest processing of vegetables.		
			2.5 Marks	
OR	iv.	The causes of post-harvest losses of fruits	2.5 Marks	5
		The causes of post-harvest losses vegetables.	2.5 Marks	

Q.3	i.	Define maturity.	1 Mark	1
	ii.	Define climacteric	1.5 Marks	3
		Define non-climacteric fruits.	1.5 Marks	
	iii.	The aspects involved in respiration of fruits	2 Marks	4
OR		The aspects involved in respiration of vegetables.	2 Marks	
	iv.	Define respiration	2 Marks	4
		Factors affecting respiration in fruits and vegetables.	2 Marks	
Q.4	i.	Define hypobaric storage	1 Mark	2
		Who discovered it	1 Mark	
	ii.	Zero Energy Cool Chamber (ZECC) storage	2 Marks	6
		Write down the principle involved	2 Marks	
OR		Construction of zero energy cool chamber.	2 Marks	
	iii.	The principle and methods of preservation	2 Marks	6
		Methods of preservation of fruits	2 Marks	
		Methods of preservation of vegetables.	2 Marks	
Q.5	i.	Differentiate between jam	1 Mark	2
		jelly.	1 Mark	
	ii.	Define marmalade	1 Mark	2
		Define and nector.	1 Mark	
OR	iii.	Define jelly.	1 Mark	4
		Describe method of preparation	1.5 Marks	
		Problems in jelly production.	1.5 Marks	
	iv.	Define jam.	1 Mark	4
Q.6		Describe method of preparation	1.5 Marks	
		Problems in jam production.	1.5 Marks	
		Attempt any two:		
	i.	Define packaging	2 Marks	4
		Describe types of packaging.	2 Marks	
	ii.	Define drying and dehydration.	2 Marks	4
		Write down the objectives, principles	1 Marks	
		Mechanism of dehydration.	1 Marks	
	iii.	Enlist different tomato products	2 Marks	4
		Describe the preparation of tomato ketchup.	2 Marks	
