

Dr. PANJABRAO DESHMUKH KRISHI VIDYAPEETH, AKOLA**SEMESTER END THEORY EXAMINATION**

B.Sc. (Hons.) Agriculture

MODEL ANSWER PAPER

Semester	:	VI (New)	Term	:	II	Academic Year	:	2020-21
Course No.	:	HORT- 366	Title	:	Post – harvest Management and Value Addition of Fruits and Vegetables			
Credits	:	(1+1)						
Day & Date	:	16/6/2021	Time	:	3.00 to 4.00 pm	Total Marks	:	40

- Note :** 1) Solve ANY FOUR questions from SECTION-A
2) Solve ANY SIX questions from SECTION-B
3) ALL questions from SECTION-C are compulsory
4) Send the PDF file of answer sheet to the email id of respective course teacher

SECTION-A**(Write the answers in 4-5 sentences only. Each question carries 4 marks)**

Q. 1 Answer	Write in brief about Importance of Post- harvest technology of fruits and vegetables It helps in reduction in postharvest losses It helps in reduction of cost of production It helps in Employment generation It helps in Exp[ort earnings Defense and astronauts have special requirement for ready to eat and high energy low volume food.
Q. 2 Answer	Define Ripening. Write in brief about Climacteric fruits and Non-Climacteric fruits with example Ripening is the process by which fruits attain their desirable flavour, quality, color, palatable nature and other textural properties. Climacteric fruits - fruits that enter 'climacteric phase' after harvest i.e. they continue to ripen. Example- Mango, Banana, Papaya, Guava, Sapot, Kiwi, Fig, Apple, Passion fruit etc Non-Climacteric fruits - fruits once harvested do not ripen further. Example – Orange, Mousambi Kinnow, Grapefruit, Grapes, Pomegranate, Litchi, Watermelon, Cherry, Raspberry, Blackberry, Strawberry etc
Q. 3 Answer	Enlist the Pre harvest factors affecting quality of the produce Crops - Quality of the fruit and vegetables are varies from crop to crop Genetic / variety – Varieties with shorter shelf-lives are generally prone to higher post harvest losses. Light –light regulates several physiological processes like chlorophyll synthesis, phototropism, respiration and stomatal opening. Temperature – all type of physiological and biochemical process related to plant growth and yield are influenced by the temperature Planting density - It affects both the quantity and quality of the produce
Q. 4 Answer	What is Packaging and enlist Points to be considered while selecting packaging material. Packaging -To assemble the produce in convenient units for marketing and distribution. Points to be considered while selecting packaging material- (1)Easy to handle(2) Economical in use(3) Rigid to protect the content (4)Free from chemical substances (5)Should allow rapid cooling,

	(6) Attractive in look (7) Should have proper ventilation
Q. 5	Write in brief about concept of value addition and write the need of value addition
Answer	<p>Value addition in Horticulture is the process in which a high price is realized for the same volume of a primary product, by means of processing, packaging, upgrading the quality or other such methods.</p> <p>Need of value addition –</p> <p>(1) To improve profitability of farmers (2) To empower farmers, weaker sections of society (3) To provide better quality, safe and branded foods to consumers</p> <p>(4) To reduce post harvest losses (5) To increase export demand and foreign exchange (6) Reduce economic risk of marketing (7) Increase opportunities for smaller farms and companies through development of markets (8) To increase farmers financial stability.</p>
SECTION-B	
(Write the answers in one sentence only. Each question carries 2 marks)	
Q. 6	(Do as directed)
	a) 25% to 40% of Fruits and vegetables are wasted due to postharvest losses.
	b) Potatoes and Sweet potatoes turn green if exposed to sunlight due to formation of solanine which has toxic properties
	c) It is used for the fruit which have non water solvent pigment (colourless)- K M S
	d) Fruits are harvested hard and green, but fully mature and are ripened near consumption areas are - climatic fruits
	e) Cytokinin maintain green colour of leafy vegetables
	f) Post-harvest losses in Farmer's field is - 15-20%
	g) Smaller fruits have large surface area leading to high respiration rate.
SECTION-C	
(Choose the correct option. Each question carry 1 mark)	
Q. 7	1) Fruit juices which do not undergo alcoholic fermentation are termed as -
	a) R T S
	b) non- fermented beverages
	c) fermented beverages
	d) None of these
	2) ----- means preventing the entry of micro organisms by maintaining of general cleanliness while picking, grading, packing and transporting of fruits and vegetables
	a) Grading
	b) Washing
	c) Asepsis
	d) None of these
	3) Losses occur after harvesting is known as -
	a) Pre harvest losses
	b) Physiological losses
	c) Post harvest losses
	d) None of these
	4) Fruits once harvested do not ripen further are –
	a) Seasonal fruits
	b) Climacteric fruits
	c) Non-Climacteric fruits
	d) None of these
	5) ----- comes under permanent method of preservation in fruits and vegetable
	a) Sterilization
	b) Low temperature storage

c)	Asepsis	d)	None of these
6) To assemble the produce in convenient units for marketing and distribution			
a)	Grading	b)	Packaging
c)	Sorting	d)	None of these

7) Replacing the Oxygen by Carbon dioxide is termed as -----			
a)	Oxidation	b)	Respiration
c)	Carbonation	d)	None of these
8) In post harvest losses, Loss of color due to high -			
a)	temperature and senescence	b)	warm weather
c)	Cold days and temperature	d)	None of these
9) Treatment of fruits and vegetables with boiling water or steam for short periods followed by cooling prior to canning is called-			
a)	Washing	b)	blanching".
c)	Girdling	d)	None of these
10) In ----- injury, formation of ice crystals inside the fruit and browning of damaged areas			
a)	Freezing	b)	Heat
c)	Blossom end rot	d)	None of these
11) ----- substances which are used to protect the food against deterioration caused by exposure to the air.			
a)	Anti-oxidants	b)	Anti- agents
c)	Anti- biotics	d)	None of these
12) In respiration, coating on surface of fruits, if more thickness of coating ----- the respiration rate.			
a)	More	b)	Moderate
c)	Less	d)	None of these

Signature of the course teacher

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