

Roll No. : (in figure) _____ (in words) _____

Student Index No. _____ Regn. No. _____ of _____

Time : Two Hours

Full marks : 40

Questions are of value as indicated in the margin

Part - I
(Objective and Short Answer Type)
(Use only ball point pen)

Time : 20 minutes

Full marks : 10

- Note:** 1. Answer in question paper itself.
2. Striking, rewriting or overwriting are not allowed in the objective type questions.

1. **Write True (T) or False (F) in the box provided for the following statements:** 0.5×5=2.5

- | | |
|--|--------------------------|
| a) In hypobaric storage, commodities are stored at reduced pressure | ☐ |
| b) The purpose of ethylene application in Orange fruits is to ripen them | ☐ |
| c) Precursor of ethylene in higher plant is Methionine | ☐ |
| d) Physiological maturity and Horticultural maturity are same in Okra | ☐ |
| e) Fruit juice content of RTS is more than 50% | ☐ |

2. **Fill up the blanks with appropriate words or phrases:** 0.5×5=2.5

- a) The post harvest operation which helps to develop periderm onto the cut injury of underground crops is called _____.
- b) The precooling method, where crops are cooled by removing latent heat of evaporation of water at considerably low pressure, is called _____.
- c) The chemical preservative commonly used in tomato sauce/ketchup is _____.
- d) During canning, the process of creating vacuum within the can by expelling air is called _____.
- e) Dehydration of fruits/vegetables by removal of water directly from its solid state at low temperature is called _____.

3. **Underline the correct from the given alternatives:** 0.5×10=5

- | | |
|--|------------------|
| a) Pectin strength in fruit extract is measured by | |
| i) Salometer | ii) Penetrometer |
| iii) Refractometer | iv) Jelmeter |

- b) Which of the following chemical is used for controlling sprouting in potato
- | | |
|------------------|----------------------|
| i) Ethylene | ii) Maleic Hydrazide |
| ii) Carnauba Wax | iv) Methyl Jasmonate |
- c) Which of the following storage method is absolutely not suitable for onion
- | | |
|-------------------------------|--------------------|
| i) Windbreaks | ii) <i>In-situ</i> |
| iii) Zero Energy Cool Chamber | iv) Clumps |
- d) Respiration rate of a harvested commodity is dependent upon
- | | |
|---------------------|--------------------------------|
| i) Stage of harvest | ii) Extent of injury inflicted |
| iii) Temperature | iv) All of these |
- e) As per FSSAI specification, the fruit pulp content in jelly should be
- | | |
|----------|---------|
| i) 45% | ii) 55% |
| iii) 35% | iv) 65% |
- f) Which of the following preservation method is based upon the principle of 'by killing the microorganisms'
- | | |
|---------------|---------------------|
| i) Canning | ii) Microfiltration |
| iii) Pickling | iv) Dehydration |
- g) The pH range of acid food is
- | | |
|--------------------------|---------------|
| i) Between 5.3 and 4.5 | ii) Below 3.7 |
| iii) Between 4.5 and 3.7 | iv) Above 5.3 |
- h) 'Oil content' is considered as maturity index in which of the fruit crop
- | | |
|--------------------|-------------|
| i) Mandarin orange | ii) Avocado |
| iii) Strawberry | iv) Apple |
- i) Which of the following crop is 'Climacteric'
- | | |
|----------------|------------|
| i) Tomato | ii) Litchi |
| iii) Pineapple | iv) Grapes |
- j) Which of the following postharvest method does not alter the atmospheric composition of the internal tissue
- | | |
|----------------------|--------------------------|
| i) Hypobaric storage | ii) Shrink wrapping |
| iii) CA storage | iv) Refrigerated Storage |

B.Sc. (Ag.) Honours Semester-VI Examination, 2017
Course No: HOR-321
(Post Harvest Management and Value Addition of Fruits & Vegetables)

Part - II
(Descriptive Type)

Time : 100 Minutes

Full marks : 30

Questions are of value as indicated in the margin

Answer *any four* questions.

4. What is precooling? What are the benefits of precooling? Briefly discuss any three methods of precooling.
0.5+1+(2×3)=7.5
5. Describe respiratory climacteric. Discuss different factors that affect respiration during postharvest handling.
2.5+5=7.5
6. What are the goals of storage? What are storage considerations? Describe any two low cost storage techniques with neat sketch.
0.5+2+5=7.5
7. Write short notes on (*any three*)
2.5×3=7.5
- a) Blanching
 - b) Marmalade and candy
 - c) Judging end point in jelly preparation
 - d) Preservatives
8. a) Give the flow-sheet for preparation of lemon squash
b) Give the flow-sheet for preparation of tomato sauce.
c) Give the flow-sheet for preparation of guava jelly.
2.5×3=7.5
9. Write short notes on (*any three*)
2.5×3=7.5
- a) Preservation by fermentation.
 - b) Principle of preservation by drying and dehydration.
 - c) Different types of microbial spoilage in canned foods.
 - d) Storage of fruits and vegetables by irradiation.
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