

B.Sc.(Ag.) Honours Semester– VII Examination, 2014
Course No. : HOR –411
(Post Harvest Management & Processing of Fruits & Vegetables)
(Old Syllabus)

Signature of Centre Superintendent

Roll No.: (in figure) _____ (in words) _____
Student Index No. _____ Regn. No. _____ of _____

Time : Two hours

Full marks : 50

Questions are of value as indicated in the margin

Part-I

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

Time : 30 minutes

Full marks : 20

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

1. Write True (T) or False (F) in respect of the following statements (any two):

1×2=2

- a) In climacteric fruits, respiration rate after harvesting remains constant. ☐
- b) Flavour depends on the complex interaction of sugar, organic acid, phenolics and volatile. ☐
- c) KMnO_4 is an antifungal agent. ☐

2. Fill up the blanks (any four):

1×4=4

- a) Physiological maturity stage is followed by _____.
- b) Blanching is done by _____.
- c) _____ improves appearance of fruits, reduce moisture losses, chilling injury and browning in storage of fruits.
- d) In hypobaric storage, the air pressure in store remains _____.
- e) _____ is important operation to reduce water loss during storage for hardy vegetables like onion, garlic, sweet potato and potato.
- f) Application of _____ promotes degreening and early ripening of fruits.

3. Match the following crops with their maturity indices:

8×0.5=4

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|------------------|-----------------------------------|
| i) Muskmelon | a) Starch test |
| ii) Watermelon | b) Easily separated from vine |
| iii) Cabbage | c) Dull hollow sound when thumped |
| iv) Okra | d) Curd compactness |
| v) Apple | e) Snapped readily |
| vi) Banana | f) Head solidity |
| vii) Cauliflower | g) Fruit firmness |
| viii) Mango | h) Specific gravity |

4. Write short notes (*any five*):

- a) Curing
- b) Drying and dehydration
- c) Spirit test
- d) Importance of Grading
- e) Colour changes during ripening
- f) Irradiation
- g) Zero energy cool chamber

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Part–II

(Descriptive Type)

Time : 1.5 Hours

Full marks : 30

Questions are of value as indicated in the margin.

Answer **any three** questions .

5. What do you mean by maturity indices? Differentiate between physiological maturity and harvest maturity. What are the maturity indices of Bottle Gourd, French Bean, Cucumber, Brinjal, Litchi, Sapota and Jackfruit. 1+2+7=10
6. Differentiate the following (**any four**) 2.5×4=10
- a) Maturity and ripening.
 - b) Climacteric and non-climacteric fruits.
 - c) CAS and MAP.
 - d) Jam and jelly.
 - e) Microbial spoilage and enzymatic spoilage.
 - f) High Temperature Short Time and Low Temperature High Time treatments.
7. Write short notes (**any four**): 2.5×4=10
- a) Lye peeling
 - b) Pre-cooling
 - c) Sheet or Flake test
 - d) Curing
 - e) Ethylene absorbant
 - f) Brine solution
8. Answer the following (**any four**): 2.5×4=10
- a) What are the sources of ethylene in environment?
 - b) What are the requirements of packaging?
 - c) What are the importance of preservation?
 - d) Why should we avoid wood as a packaging material?
 - e) What are the pre-harvest factors that affect postharvest life of fruits and vegetables?
 - f) What are the problems faced in pickle making?
9. Describe briefly major steps of fruit ripening process. What are the causes responsible for deterioration of fruits and vegetables after harvesting? 6+4=10
10. What is drying? What are the basic principles of drying? Briefly describe the different steps of drying. 1+2+7=10
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