

B.Sc. (Ag.) Honours Semester-VI Examination, 2019

**Course No: HOR-321 (Post-Harvest Management and Value Addition
of Fruits and Vegetables)**

Signature of Centre Superintendent

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

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

Time : 2 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. Fill up the blanks:

0.5×5=2.5

- (a) Refractometer is used for measuring _____ of fruit.
- (b) 'Tapka' stage is a maturity index of _____.
- (c) The rate of respiration increases during ripening of _____ type of fruit.
- (d) Irradiation is also called _____ sterilization.
- (e) Full form of CFB box is _____.

2. Tick (✓) the correct answer from the given alternatives:

0.5×5=2.5

- (a) Freezing involves the principles of (i) Addition of cold (ii) Removal of heat (iii) Addition of ice (iv) None of them.
- (b) The sparkling clear sweetened fruit juice is known – (i) Squash (ii) Nectar (iii) Cordial (iv) Fruit syrup.
- (c) According to the FPO specification, fruit squash contain _____ % of juice (i) 10% (ii) 15% (iii) 25% (iv) 50%.
- (d) Major constituent present in fruits and vegetables is carbohydrate (i) Carbohydrate (ii) Fat (iii) Protein (iv) Water.
- (e) Dehydration means – (i) Drying under sun (ii) Drying in the shade (iii) Drying under control condition (iv) Drying caused by evapo-transpirational loss.

4. Answer the following (*any five*):

1×5=5

- (a) Write one difference between drying and dehydration.

- (b) What is ketchup?

(2)

(c) Define pasteurization.

(d) Differentiate CA & MA storage.

(e) Give examples of chemical preservatives.

(f) Write any two maturity indices of litchi.

(g) Name the Process products of tomato.

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Part - II
(Descriptive Type)

Time : 100 minutes

Full marks : 30

Questions are of value as indicated in the margin

Answer *any four* questions

5. Enumerate in detail about the pre-harvest factors affecting quality of horticultural crops after harvest. 7.5
6. (a) What are the general problems that limit the ultimate storage life of fruits and vegetables?
- (b) Which are the possible regulatory measures for overcoming those problems? 3.5+4=7.5
7. (a) Write down the importance of packaging, lining and cushioning materials used for packing of fruits and vegetables.
- (b) Write down the requisite packaging norms to be used for export. 4.5+3=7.5
8. What do you mean by jam, jelly and marmalade? How to do the pectin test and judge the end point in jelly preparation? Mention the unit operations to be followed for jam preparation with suitable flow chart. 0.5+2+4=7.5
9. (a) State the principles and requirements of pickle preparation.
- (b) Mention the various steps of canning technology. 5+5=10
10. (a) What is ripening? Write in brief about the physical and bio-chemical changes of fruits during ripening.
- (b) Differentiate between physiological and horticultural maturity. 1+5+1.5=7.5
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