



FIJI NATIONAL UNIVERSITY
College of Agriculture, Fisheries & Forestry
School of Agriculture and Forestry
Department of Crop Science
Bachelor of Science in Agriculture (Year III)
Supplementary Examination
Semester II– 2019

HOR 701 – Post harvest Management and Value Addition of Fruit and Vegetables
Total Marks: 100

Time Allowed: Three Hours

[An extra ten minutes is allowed for reading this paper]

INSTRUCTIONS

1. This paper consists of Four pages.
2. Please check to see that all your paper is complete.
3. Answer all questions in the answer booklet only.
4. No written or printed material are allowed in the examination hall.
5. Marks allotted for each section appears at the side of each question so allocate your time accordingly.
6. This paper is divided into three section.

Section A: Multiple Choice

Section B: Short answers

Section C: Essay

(10 Marks)

(30 Marks)

(60 Marks)

- A. There are ten multiple-choice questions in this part.
B. **All** are compulsory.
C. Each question is worth 1 mark.
D. For each question, circle the letter of the **best** answer on the grid provided in the Answer Booklet.

1. Lycopene is the main coloring compound in
 - a. Apple
 - b. banana
 - c. Tomato
 - d. Chilli
2. Firmness, crispness, mealiness, juiciness and hardness terms are related to _____.
 - a. Texture
 - b. Structure
 - c. Pressure
 - d. None of the Above
3. Maturity indices of fruits and vegetables are important because they ensure _____.
 - a. Sensory quality
 - b. Nutritional quality
 - c. Post-harvest life
 - d. All of the above
4. Which of the following is not an advantage of hand harvesting _____?
 - a. Inaccurate selection of maturity
 - b. Accurate grading
 - c. Less expensive
 - d. Minimum capital investment
5. Fruits become soft after ripening mainly due to dissolution of _____ substance in the cell wall.
 - a. Fat
 - b. Carbohydrate
 - c. Protein
 - d. Pectin
6. Salt in concentration of _____ or above acts as preservative.
 - a. 10%.
 - b. 12%.
 - c. 8%.
 - d. 15%.

7. Pectin is activated in presence of _____.
- High sugar
 - Acid
 - Both A and B
 - None of the above
8. Which of the following is not main objective of storage _____?
- Increase biological activity
 - Slow biological activity
 - Slow growth of microorganisms
 - Reduce transpiration loss
9. Vacuum cooling is most efficient method of cooling for _____.
- Apple
 - Banana
 - Tomato
 - Leafy vegetables
10. Which of the following fruit is not suitable for canning?
- Pineapple
 - Guava
 - Mango
 - Lemon

SECTION. B

[Compulsory]

(30 Marks)

SHORT ANSWERS

- **Answer all the following questions.**
 - **Each question is worth 5 marks.**
 - **There are 6 questions only.**
1. Analyze the importance and scope of fruit and vegetable processing in Fiji.
 2. Compare between vacuum cooling and room cooling.
 3. Utilize your knowledge to discuss edible film packaging.
 4. Provide information on advantages of fruit and vegetable preservation.
 5. Analyze physiological maturity and horticultural maturity with examples.
 6. Analyse the function, purpose and characters of cushioning materials.

Section C

Long Answers

[60 marks]

- **There are 6 questions in this section.**
 - **Answer only three (5) questions.**
 - **Each question is worth 12 marks.**
 - **Answer each question in approximately 350 words in the Answer Booklet provided.**
1. Analyze in detail about controlled atmosphere packaging?
 2. Provide your understanding about chemical preservatives and apply your knowledge to describe chemical preservatives and food additives.
 3. Apply your knowledge to list unfermented beverages and discuss them in detail.
 4. Provide information on different color and respiration rate changes during ripening.
 5. Define harvesting? Provide the important considerations, while preparing for harvesting of fruit and vegetables.
 6. What do you mean by pre-cooling? Demonstrate in brief, different methods of precooling?

THE END