



FIJI NATIONAL UNIVERSITY

College of Agriculture, Fisheries & Forestry

School of Agriculture and Forestry

Department of Crop Science

Bachelor of Science in Agriculture (Year III)

Final Examination

Trimester 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

(10 Marks)

Section B: Short answers

(30 Marks)

Section C: Essay

(60 Marks)

SECTION A

MULTIPLE CHOICE

[10 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. Firmness, crispness, mealiness, juiciness and hardness are Term related to _____.
 - a. Texture
 - b. Structure
 - c. Pressure
 - d. None of the Above

2. 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

3. Lycopene is main coloring compound in _____.
 - a. Tomato
 - b. Cucumber
 - c. Brinjal
 - d. Watermelon

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. Pectin is activated in presence of _____.
- High sugar
 - Acid
 - Both A and B
 - None of the above
7. Packaging play a vital role in _____.
- Conservation
 - Preservation
 - Transportation
 - All 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. Asepsis means _____.
- Hindering the growth and activity of micro organisms
 - Removal of micro organisms
 - Keeping out the micro organisms
 - Killing the micro organisms

SECTION. B

[Compulsory]

(30 Marks)

SHORT ANSWERS

- **Answer all the following questions.**
- **Each question is worth 5 marks.**
- **There are 6 questions only.**

1. Provide Definition of drying and discuss type of drying in detail?
2. Write short notes on:
 - a. Jam
 - b. Jelly
3. Compare between vacuum cooling and room cooling.
4. Utilize your knowledge to discuss edible film packaging.
5. Utilize your knowledge to discuss advantages of fruit and vegetable preservation.

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. Provide your understanding about chemical preservatives and apply your knowledge to describe chemical preservatives and food additives.
 2. Apply your knowledge to list unfermented beverages and discuss them in detail.
 3. Apply your knowledge on preparation of pickles and different method of preservations.
 4. Define harvesting? Provide the important considerations, while preparing for harvesting.
 5. Provide benefits of storage and application of controlled/ modified atmosphere storage.
 6. Apply your knowledge to discuss the active packaging and describe in detail the controlled and modified atmosphere packaging.

THE END