

Code No: RT41353

**R13****Set No. 1**

**IV B.Tech I Semester Supplementary Examinations, February - 2019**  
**POST HARVEST ENGINEERING FOR HORTICULTURE PRODUCE**  
**(Agricultural Engineering)**

**Time: 3 hours****Max. Marks: 70***Question paper consists of Part-A and Part-B**Answer ALL sub questions from Part-A**Answer any THREE questions from Part-B*

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**PART-A (22 Marks)**

1. a) How do pre harvest factors affect the quality of fruits and vegetables? [4]
- b) Write in brief about the chemical washing of fruits and vegetables. [4]
- c) Write about cryogenic and dehydro freezing methods. [4]
- d) Brief about the advantages of hydro cooling. [4]
- e) Explain about deaeration and fortification of preservation of unfermented fruit beverages. [3]
- f) Draw the flow chart for extraction of essential oil from spices. [3]

**PART-B (3x16 = 48 Marks)**

2. a) List out the mechanical properties which affect the quality of fruits and vegetables. [8]
- b) Enumerate the optical and electrical properties which affect the quality of fruits and vegetables. [8]
3. a) What is peeling? How do you determine maturity standards for fruits and vegetables? [8]
- b) What are various types of graders? Explain any three of them. [8]
4. a) Explain the canning process of fruits and vegetables along with flow chart. [8]
- b) Write in detail about the principles of preservation of fruits and vegetables. [8]
5. a) Define CAS. Write in detail about the maintenance of CAS system. [8]
- b) Write about transportation of fruits and vegetables by refrigerated trucks and Centralized cold storage centers. [8]
6. a) Write in detail about the preparation of grape juice with the help of flow chart. [8]
- b) Explain the different packaging materials used for packing of fruits and vegetables. [8]
7. a) Explain about the solvents and factors responsible for extraction of oleoresin. [8]
- b) Write in detail about the preparation of vinegar with the help of a flow chart. [8]