JHARKHAND Rai University
RANCHI

End Semester/Reappear (Semester VI) Examination May 2025

Programme:B. Sc. (Hons.) Agriculture

Course:Post-harvest Management and Value Addition of Fruits and Vegetables **Full Marks: 50**

Course Code: 13A.362 **Time: 2 Hrs.**

Enrolment no. _____

Q.No.	Questions	CO	Bloom Taxonomy Category	Marks
	Section I			
1	**Short Answer type questions.**			**4 x 5 = 20**
a	Outline the importance of minimizing post-harvest losses for national food security.	CO1	Apply	
	or			
	Identify and explain two mechanical and two physiological causes of post-harvest deterioration.	CO1	Understand	
b	Enlist the methods of pre-cooling fresh produce.	CO2	Remember	
	or			
	Briefly discuss cryogenic cooling.	CO2	Understand	
c	Explain any two types of packaging materials used for storing and transporting produce.	CO3	Understand	
	or			
	Explain how osmotic dehydration differs from sun-drying.	CO3	Understand	
d	Enlist and briefly describe any five types of dryers	CO3	Understand	
	or			
	Illustrate the process of drying of fruits with the help of flow chart.	CO3	Apply	
	Section II			
Long Answer type questions.				2 x 15 = 30
2	Compare hydrocooling vs. vacuum cooling in terms of cooling rates and practical limitations.	CO2	Analyze	
	or			
	Analyse the maturity criteria (physical and chemical) for harvesting fruits and vegetables.	CO2	Analyze	
3	Evaluate the status of food processing industry in India by providing 5 examples of food processing industries.	CO4	Evalaute	
	or			
	Conclude the preparation of apple sauce including recipe and flowchart of the process.	CO4	Analyze	

Course Outcome:

At the end of the Course, the Student will be able to-

CO1 Apply pre-harvest and post-harvest technologies in agricultural commodities.

CO2 Develop various post-harvest management and novel packaging techniques for fresh and processed products.

CO3 Identify various processing problems (storage, shelf life of food product, spoilage, etc.) faced by the processors/farmers and develop methods to eradicate those problems and design and develop various products related to food processing

CO4 Apply knowledge for setting processing units for Indigenous fruits and vegetables through different project reports