



KERALA AGRICULTURAL UNIVERSITY
B. Tech. (Agrl. Engg.) 2023 & Previous Admissions
VI Semester Final Examination – June 2026

Fape 3206

Post Harvest Engineering of Horticultural Crops (1+1)

Marks: 50
Time: 2 hours

I Match the following (10x1=10)

1. Blanching	A. Clostridium botulinum
2. Coefficient of performance	B. Liquid droplets
3. Spray drying	C. Refrigeration
4. Food spoilage	D. Fruits and vegetables
5. Plank's equation	E. Bacteria, mould, yeast
6. Anaerobic micro-organism	F. Freezing time
7. Fluidized bed drying	G. Size reduction having multidirectional rupture
8. Sublimation	H. Anti-oxidant
9. Ascorbic acid	I. Freeze drying
10. Crushing	J. Peas

II Write short on ANY FIVE of the following (5x2=10)

1. What is the role of vacuum pump in freeze dryer?
2. Define the phenomena of "case hardening" in fruits and vegetables during drying.
3. Define chemical peeling of fruits and vegetables with examples.
4. What is the difference between chilling and freezing of horticultural crops?
5. Write the sequence of unit operations performed in pack house of mango.
6. Enlist the factors affecting quality of minimally processed food products.
7. Write is the role of refrigerated vehicles in food supply chain?

III Answer ANY FIVE of the following (5x4=20)

1. Write short note on cryogenic freezing. Enlist any two cryogenic liquids with their boiling points.
2. What is the mechanism of osmo-dehydration? Write its advantages.
3. Discuss the growth curve of microorganisms.
4. What is evaporative cooled storage? Write its limitations.
5. Write the differences between D Value and Z value used in thermal processing.
6. Write the importance of processing of horticultural crops.
7. Write the differences between fluidized bed dryer and freeze dryer.

IV Write an essay on ANY ONE of the following (1x10=10)

1. Write the objectives of blanching. Discuss the effects of blanching on nutritional and textural properties of fruits and vegetables.
2. Discuss the essential features of controlled atmosphere storage? Write its limitations.
