



KERALA AGRICULTURAL UNIVERSITY
B.Tech.(Food Technology) 2024 Admission
II Semester Final Examination – August 2025

FPE 1202

Unit Operations in Food Processing (2+1)

Marks: 50
Time: 2 hours

I Fill in the blanks

(10x1=10)

1. Drying is a and process by which the moisture is removed from the grain and other products to a predetermined level.
2. EMC is determined byand.....method under constant relative humidity and temperature.
3. The fluid in which consistency decrease with increasing shear rate is known as
4. Steam economy isin backward feed evaporator.
5. Viscosity of gaseswith the in the temperature.
6. andare two methods to perform ultra-high temperature (UHT) processing.
7. Coffee is prepared from coffee beans by leaching with
8. The ratio of amount of water evaporated per hour to the amount of steam consumed per hour is called.....
9. chemical is used as disinfectant in aseptic processing.
10. The Boiling point elevation as the evaporation in an evaporator proceeds can be approximately measured by.....

II Write short notes on ANY FIVE of the following

(5x2=10)

1. Dehydration
2. F- value
3. Puffing
4. UHT
5. Critical moisture content
6. Leaching
7. Distillation

III Answer ANY FIVE of the following

(5x4=20)

1. Explain the process of pasteurization and its importance in food preservation.
2. What is aseptic packaging, and how does it help in maintaining food safety?
3. Explain principle and equipment used in freeze drying.
4. What is evaporation and forward type evaporator?
5. What is blanching, and why is it performed before freezing vegetables?
6. Calculate the D-value of an organism which shows 30 survivors from initial inoculums of 5×10^6 spores after 10min at 121°C . Also calculate the reaction rate constant.
7. What are crystallization and its importance?

IV Write an essay on ANY ONE of the following

(1x10=10)

1. What are multiple effect evaporators? With help of neat relevant diagrams, explain different feeding methods in multiple effect evaporation systems.
2. Food processing and its scope in India
