KERALA AGRICULTURAL UNIVERSITY

B. Tech.(Food Technology) 2023 & Previous Admission

VI Semester Final Examination – June 2026

Pafe 3236

Emerging Methods of Food Preservation (2+1)

Marks: 50

Time: 2 hours

(10x1=10)

I **Fill in the blanks**

1. The most commonly employed source of gamma irradiation …….
2. The principal frequencies of microwave used for industrial and domesticated setup are …….. & ……..
3. Indirect compression is achieved by pumping additional fluid into the vessel using a high pressure pump -the so called……..
4. The UV considered for germicidal effect is ……
5. Bromelain enzyme is derived from ……
6. Ultrasonic waves passing through a liquid produce alternate compression and rarefaction known as ……
7. Dielectric constant…… with moisture and salt content.
8. High Pressure Processing is based on …….. effect.
9. The energy penetrating the surface of the Pulsed-light treated material is absorbed in accordance with …….. law
10. The physical method for detection of irradiation is ……

(5x2=10)

II **Write short notes on ANY FIVE of the following**

1. Physical hazards
2. Pulsed Electric Field Processing
3. Ozone application in food industry
4. Cold plasma technique
5. Principles of food preservation
6. Dosimetry
7. Hurdle effect

(5x4=20)

III **Answer ANY FIVE of the following**

1. Describe Pulsed light Processing (PLP), its principle. Also explain the treatment chamber for PLP treatment.
2. Define Microwave heating and state its applications in food processing.
3. What is enzyme technology? Enlist some enzymes used in food processing.
4. Define High pressure processing, its principle and working mechanism.
5. Discuss about oscillating magnetic field. Briefly mention the equipment for generation and its effect.
6. Describe Ohmic and Radiofrequency heating.
7. Define Sterilization by UV.

(1x10=10)

IV **Write an essay on ANY ONE of the following**

1. Define ultrasound along with its importance, equipment, working principle and applications in food processing.
2. What do you understand by food irradiation? State different sources, principle and working mechanism along with effect on microbial inactivation.

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