

Kerala Agricultural University
Kelappaji College of Agricultural Engineering and Technology
B Tech (Food Engineering and Technology) 2016 Admission
Final examination

Cat. No: Fden. 0001

Marks: 50

Title: Emerging Non Thermal Methods of Food Preservation (3+0)

Time: 2 hr

I. Fill in the blanks

(10X1=10)

1. Oxygen absorbers in active packaging are usually made of _____ and _____.
2. _____ is the process of application of ultra sound at low temperature.
3. _____ and _____ are examples of non porous membranes used in filtration.
4. Salami type fermented sausages are preserved by _____.
5. 1 Tesla = _____ Gauss
6. Water activity of intermediate moisture foods lies in the range of _____ to _____.
7. Ultrasound waves of _____ energy and _____ frequency are used for freezing and thawing operations.
8. Radiation dose (kGy) for inhibiting sprouting of potato, onions and garlic is about _____.
9. *Aspergillus flavus* and *A. parasiticus* molds are responsible to produce a toxin in food known as _____.
10. Ultrafiltration has a poresize of approximately _____ μm .

II. Answer any five of the following

(5X2=10)

1. Differentiate between stable and transient cavitation
2. Differentiate between nanofiltration and microfiltration
3. Explain multitarget preservation and homeostasis
4. Advantages and disadvantages of irradiation in food
5. Differentiate between CAS AND MAS
6. Differentiate between radication and radurisation
7. Different types of hazards in food

III. Answer any five questions

(5X4=20)

1. List out the steps involved in the preparation of fruit bars
2. Explain the role of various gases in food packaging
3. Mechanism of inactivation using ozone technology
4. Components of oscillating magnetic field setup
5. The development of 'smart' films, more recently described as 'active' or 'intelligent', probably account for the most significant area of advancement in MAP. Comment
6. Design of a Pulsed electric field setup
7. Draw a flowchart showing the steps involved in minimal processing of cabbage.

IV. Answer any one question

(1x10=10)

1. Give a detailed note on the HPP system
2. Briefly explain the applications of ultrasound in food industry