



KERALA AGRICULTURAL UNIVERSITY
B.Tech.(Food Engg. & Technology)
VIII Semester Final Re- Examination – August 2023
2019 Admission

Fden.2207

Unit Operations in Food Engineering (2+1)

Marks: 50
Time: 2 hours

I Fill in the blanks (10x1=10)

1. Microwave radiation at a frequency of is allocated for domestic microwave heating applications.
 2. law is used to calculate Work Index.
 3. Fractional distillation is carried out inunit.
 4. Spiral separator separates the grain as per their
 5. The liquid phase remaining after the formation of the crystals is called as
 6. is the removal of relatively small content of liquid from compressible milled foods by mechanical means.
 7. Dimensions are measured in terms of
- Choose the correct answer**
8. Cryogenics can be effectively used for:
 - (a) Rice milling
 - (b) Oil milling
 - (c) Spice milling
 - (d) Pulse milling
 9. Irradiation of food is:
 - (a) Thermal process
 - (b) Non-thermal process
 - (c) High pressure process
 - (d) Impregnation process
 10. Supercritical fluid extraction technique is suitable for extraction of:
 - (a) Essential oil
 - (b) Protein
 - (c) Carbohydrate
 - (d) Germ oil

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

1. Water activity
2. Sedimentation and Centrifugal separation
3. Stokes's law
4. Differentiate distillation and evaporation.
5. Extrusion cooking
6. Working of cyclone separator
7. Define the term "boiling point elevation."

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

1. Microwave cooking
2. Application of food irradiation process
3. Membrane separation and types of membranes used in membrane separation process.
4. Hammer mill

5. Ultra filtration and mention its application in food industry.
6. Supercritical fluid extraction
7. Flash distillation process

IV Write an essay on ANY ONE of the following

(1x10=10)

1. Types of extruders and explain different zones in an extruder with a neat sketch.
2. Various evaporators used in food industry
