

- Q.24 Explain flash distillation.
- Q.25 Write about the Extraction.
- Q.26 Write about Kick's law of size reduction.
- Q.27 Discuss any three types of sieves.
- Q.28 Explain unit operations that occur during ice formation.
- Q.29 Differentiate saturation and supersaturation.
- Q.30 Discuss cyclone separators.
- Q.31 Write about distillation.
- Q.32 Explain the process of homogenization.
- Q.33 Describe the ant two types of cutting machines.
- Q.34 Explain the process of "crushing" and "grinding" as unit operations in size reduction.
- Q.35 Explain the principle of sedimentation. How does particles size and density influence the efficiency of sedimentation processes?

#### SECTION-D

- Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)
- Q.36 Discuss types of filtration process used in food processing.
- Q.37 Explain different types of extraction techniques.
- Q.38 Explain various types of crystallizers.

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### 3rd Sem / Food Technology

#### Subject:- Unit Operation in Food Processing / Pr. Of Food Engg.

Time : 3Hrs.

M.M. : 100

#### SECTION-A

**Note:** Multiple choice questions. All questions are compulsory (10x1=10)

- Q.1 Which unit operation involves the separation of a liquid mixture into its individual components based on their boiling points?
- a) Filtration                      b) Distillation  
c) Evaporation                  d) Absorption
- Q.2 Which is not a cleaning method
- a) Abrasion                      b) Aspiration  
c) Floatation                      d) Kneading
- Q.3 Which unit operation is used to remove solid impurities from a liquid by causing the solid particles to settle at the bottom?
- a) Filtration                      b) Sedimentation  
c) Extraction                      d) Evaporation
- Q.4 Which factors affect the screening method.
- a) Surface area of the particles  
b) Specific gravity of the particles  
c) Magnetic properties of the particles  
d) Size of particles

- Q.5 Which one is a type of filter aid material.  
 a) Salt                              b) Sugar  
 c) Activated charcoal      d) None of these
- Q.6 Which unit operation involves the reduction of the size of solid particles?  
 a) filtration                      b) Sedimentation  
 c) Grinding                      d) Crystallization
- Q.7 Which unit operation occurs while formation of ice crystals  
 a) Crystallization              b) Melting  
 c) Precipitation              d) Distillation
- Q.8 Which unit operation involves the heating of a liquid mixture to vaporize the volatile component and then condensing it back to a liquid?  
 a) Filtration                      b) Crystallization  
 c) Evaporation                  d) Distillation
- Q.9 Which process can be used for separating oil from oilseeds  
 a) Extraction                      b) Filtration  
 c) Distillation                      d) Crystallization
- Q.10 In which unit operation does a solid settle out of a suspension due to the force of gravity?  
 a) Filtration                      b) Sedimentation  
 c) Evaporation                  d) Crystallization

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## SECTION-B

**Note:** Objective type questions. All questions are compulsory. (10x1=10)

- Q.11 Nucleation in the first step of ice formation (True/False)
- Q.12 Defined precipitation.
- Q.13 Leaching occurs during the cooking of vegetables (True/False)
- Q.14 Supersaturation is the excess of solutes in the solution (True/False)
- Q.15 Unit operations used for reducing fat globules in milk\_\_\_\_\_
- Q.16 Unit operation separates solid particles from a liquid by gravity through a porous medium\_\_\_\_\_
- Q.17 Centrifugation used for\_\_\_\_\_
- Q.18 Mixing is a reversible process (True/False)
- Q.19 BIS stands for\_\_\_\_\_
- Q.20 Screw press used for\_\_\_\_\_

## SECTION-C

**Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

- Q.21 Write down the functions of cleaning in food industries.
- Q.22 Explain specific gravity separators.
- Q.23 What are the objectives of sorting for fruit processing.

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