

6. Differentiate between the following : (Any three)
(6×3=18)

- (i) Spray Dryer and Drum Dryer
- (ii) Filtration and Sedimentation
- (iii) Air freezing and immersion freezing
- (iv) F value and Z value
- (v) Co current and counter current tunnel dryer

7. (a) Define D value. Discuss the importance and applications of thermal process calculations in food safety and processing. (9)
- (b) Discuss the construction, working and applications of Spray dryer. (9)

(400)

[This question paper contains 4 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 1789

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Unique Paper Code : 2202031201

Name of the Paper : Principles of Food Processing

Name of the Course : B.Sc. (H) Food Technology
(NEP-UGCF-2022)

Semester : II DSC

Duration : 3 Hours

Maximum Marks : 90

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt five questions in all.
3. Question No. 1 is compulsory.
4. All questions carry equal marks.

1. Define/describe the following briefly : (3×6=18)

- (i) D value
- (ii) Freezer burn

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(iii) Distillation with rectification

(iv) Screw conveyor

(v) Refrigeration load

(vi) Modified atmospheric storage

2. Illustrate the following with neat labelled diagram
ONLY (Any three): (6×3=18)

(i) Co-current Tunnel dryer

(ii) Vacuum dryer

(iii) Pneumatic conveyor

(iv) Fluidized bed freezer

3. Write short notes on: (Any three) (6×3=18)

(i) Lethality concept

(ii) Requirements of frozen storage

(iii) Hildebrandt Extractor

(iv) Aseptic Processing

(v) Direct freezing

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4. (a) "Material handling equipments have an important role in food processing industry". Justify the statement. (6)

(b) Describe major changes that take place during dehydration of foods and how can they be prevented. (6)

(c) Discuss the principle of centrifugation with applications. (6)

5. (a) What are the different separation processes encountered in the food industry? Elaborate the principle and method of operation of distillation process. (3+7=10)

(c) Define briefly: (8)

(i) Porosity

(ii) Atomizer

(iii) Cryogenic freezing

(iv) Hypobaric storage

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