

- (a) Freezing
- (b) Evaporation
- (c) Commercial sterilization
4. (a) Explain thawing. Discuss the effects of thawing observed in foods. (6)
- (b) Discuss the classification of foods based on pH. (6)
- (c) Briefly describe the historical evolution of food preservation techniques. (6)
5. Write short notes on : (6×3=18)
- (a) Food Irradiation
- (b) Types of blanching
- (c) Pasteurization
6. (a) Define the term shelf-life. Classify the foods based on their shelf life, explain with examples? Also elaborate the reasons which make some foods shelf stable. (12)
- (b) Refrigeration is different from freezing. Explain. (6)

(700)

[This question paper contains 4 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 4117 H

Unique Paper Code : 2202031202

Name of the Paper : Technology of Food Preservation DSC

Name of the Course : B.Sc. (H) Food Technology

Semester : II

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. First question is compulsory and attempt any other **four** questions from the remaining.
 3. Parts of the question to be attempted together.
 4. **All** questions carry equal marks.
 5. Calculator not applicable.
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1. State whether True /False and correct and rewrite the false statements given below : (1×18=18)
 - (i) During freeze drying water is removed from food from frozen state without transition through the liquid state.

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- (ii) Milk should always maintain the cold chain in chill storage which is between 5°C to 7°C.
- (iii) Salting out is a term used to describe a defect during *chilled storage*.
- (iv) Slow freezing leads to the formation of minute ice crystals.
- (v) Drying can be defined as the application of moist heat under controlled conditions to remove the water normally present in a food.
- (vi) The radioactive isotope generally used for irradiating foods is Cobalt₁₃₇.
- (vii) The USA accepts irradiated bananas from India since 2007.
- (viii) Cold pasteurization is a term used to chill any fluid after pasteurization.
- (ix) Aseptic technology keeps food safe and flavorful for at least six months without refrigeration or preservatives.
- (x) Drying systems are designed to maximize temperature differences between the product and the drying air to increase the rate of dehydration.
- (xi) Sodium chloride is added to food during blanching to improve the colour.

- (xii) Iron or tin react with anthocyanins to form a purple pigment.
 - (xiii) In milk the development of a cooked flavour is due to denaturation of lactose.
 - (xiv) Micro crystals are formed during slow freezing of foods.
 - (xv) Rad is the unit of food irradiation.
 - (xvi) Foods with pH above 5.3 are known as low acid foods.
 - (xvii) Deep cooling refers to the process of cooling liquid below its freezing temperature without it becoming a solid/ ice.
 - (xviii) Pasteurization does not kill all microorganisms.
2. Differentiate between the following : (6×3=18)
- (a) Slow freezing and Quick freezing
 - (b) Sun drying and Dehydration
 - (c) Cold sterilization and Sterilization
3. Explain the following preservation technologies : (6×3=18)