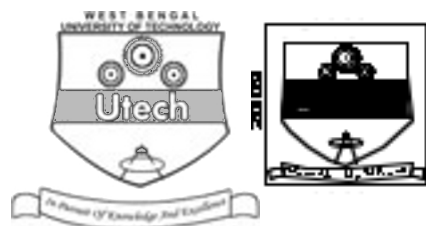


PRINCIPLES OF FOOD PRESERVATION (SEMESTER - 4)

CS/B.Tech (FT)/SEM-4/FT-402/09



1.
Signature of Invigilator

2.
Signature of the Officer-in-Charge

Reg. No.

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Roll No. of the
Candidate

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CS/B.Tech (FT)/SEM-4/FT-402/09

ENGINEERING & MANAGEMENT EXAMINATIONS, JUNE – 2009

PRINCIPLES OF FOOD PRESERVATION (SEMESTER - 4)

Time : 3 Hours]

[Full Marks : 70

INSTRUCTIONS TO THE CANDIDATES :

1. This Booklet is a Question-cum-Answer Booklet. The Booklet consists of **32 pages**. The questions of this concerned subject commence from Page No. 3.
2. a) In **Group – A**, Questions are of Multiple Choice type. You have to write the correct choice in the box provided **against each question**.
b) For **Groups – B & C** you have to answer the questions in the space provided marked 'Answer Sheet'. Questions of **Group – B** are Short answer type. Questions of **Group – C** are Long answer type. Write on both sides of the paper.
3. **Fill in your Roll No. in the box** provided as in your Admit Card before answering the questions.
4. Read the instructions given inside carefully before answering.
5. You should not forget to write the corresponding question numbers while answering.
6. Do not write your name or put any special mark in the booklet that may disclose your identity, which will render you liable to disqualification. Any candidate found copying will be subject to Disciplinary Action under the relevant rules.
7. **Use of Mobile Phone and Programmable Calculator is totally prohibited in the examination hall.**
8. You should return the booklet to the invigilator at the end of the examination and should not take any page of this booklet with you outside the examination hall, **which will lead to disqualification**.
9. Rough work, if necessary is to be done in this booklet only and cross it through.

No additional sheets are to be used and no loose paper will be provided

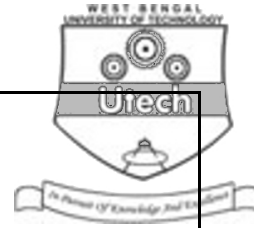
FOR OFFICE USE / EVALUATION ONLY

Marks Obtained

Group – A								Group – B				Group – C				Total Marks	Examiner's Signature
Question Number																	
Marks Obtained																	

.....
Head-Examiner / Co-Ordinator / Scrutineer

4485 (08/06)



DO NOT WRITE ON THIS PAGE



ENGINEERING & MANAGEMENT EXAMINATIONS, JUNE – 2009
PRINCIPLES OF FOOD PRESERVATION
SEMESTER - 4



Time : 3 Hours]

[Full Marks : 70

GROUP – A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for the following :

10 × 1 = 10

i) Example of IMF is/are

a) jam

b) dry sausage

c) sweetened condensed milk

d) all of these.

ii) The chemical preservative is

a) Calcium oxide

b) Calcium oxalate

c) Calcium chloride

d) Calcium propionate.

iii) Bacteria, which is able to grow in the presence of high concentration of salt, is called

a) Halotolerant

b) Osmotolerant

c) Xerotolerant

d) None of these.

iv) Putrefaction is the anaerobic degradation of

a) carbohydrate

b) protein

c) fat

d) none of these.



v) Glazing should be done for

a) canned food

b) dried food

c) irradiated food

d) frozen food.

vi) The ends of normal cans of food with a vacuum are slightly

a) flat

b) convex

c) concave

d) none of these.

vii) Foods with pH 3.7-4.5 are called

a) Acid food

b) Alkaline food

c) High acid food

d) None of these.

viii) Sauerkraut is produced from

a) soyabean

b) milk

c) cereals

d) cabbage.

ix) In the process of Canning, organism killed are

a) Thermophiles

b) Mesophiles

c) Psychrophiles

d) All of these.

x) Flat Sour is a spoilage of canned foods associated with

a) acid formation unaccompanied by gas production

b) acid formation accompanied by gas production

c) only gas production

d) neither acid formation nor gas production.



5

GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following.



3 × 5 = 15

2. Discuss the factors which are important for calculation of processing time for canned foods.
3. Write a short note on Equilibrium relative humidity and its importance.
4. Compare between slow and rapid freezing processes.
5. Write a short note on cold storage of foods mentioning the factors to be considered for such storage.
6. Write a short note on general mode of actions of chemical preservatives.

GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following.

3 × 15 = 45

7. Explain the concept of water activity and its importance in food preservation. Discuss the method which uses this concept in preserving foods. What are the principles of combined methods of preservation and its advantage ?
4 + 6 + 5
8. Which is the method by which the food value of the preserved material is likely to increase ? Discuss any such process. Indicate how the nutritive value increases.
1 + 10 + 4
9. Food preserved by a particular method has to be specifically labelled indicating the method of preservation. What is the method and which are the agents ? Compare the suitability of such agents. What is the principle of such preservation ? Which are the foods which can be preserved by such techniques ?
1 + 2 + 3 + 6 + 3



10. How the acceptability of food is affected by radiation ? Explain the factors responsible for the survival of microorganisms of an irradiation process.

$$7\frac{1}{2} + 7\frac{1}{2}$$



11. What are the factors that affect the process time of a canning process ? What is the purpose of filling liquor ? Why quick cooling is necessary in the process of canning ? A suspension containing 3×10^5 spores of organism A having a D value of 1.5 min and 8×10^6 spores of organism B having a D value of 0.8 min at 121.1 C is heated. Calculate the heating time needed to obtain a probability of spoilage 1/1000.

$$4 + 3 + 3 + 5$$

END