

KATHMANDU UNIVERSITY
End Semester Examination
February/March, 2018

MAR 15 2018
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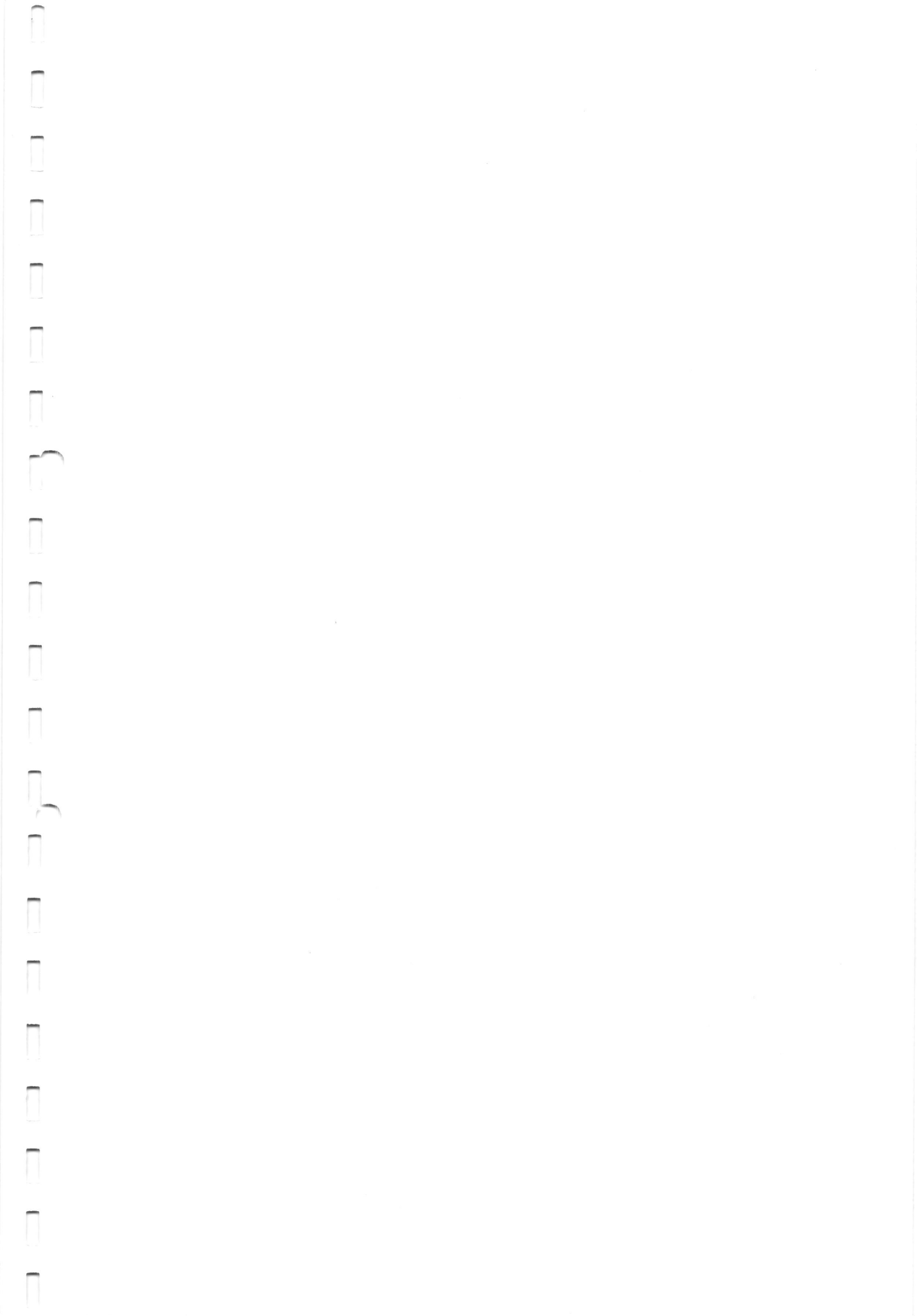
Level : B.Tech.
Year : IV
Time : 2 hrs. 30 mins.

Course : BIOT 416
Semester: I
F. M. : 55

SECTION "C"
[11 Q.×5=55 marks]

Attempt *ANY ELEVEN* questions. Give short and relevant answers. All the questions carry equal marks:

- 1) What is food spoilage? What are the causes behind food spoilage? Classify the food based on their ease of spoilage.
- 2) Define Natural preservatives. What are the main origins of natural preservatives? List out the natural preservatives with different origin available in Nepali market.
- 3) What are the traditional fermented foods available in Nepal? As a bio-technologist, how do you proceed in preservation and processing of these foods to commercialize in national and international markets?
- 4) Distinguish the terms Pasteurization, Radiation, and Sterilization. Write short description on Importance, Scope and Benefits of food Processing.
- 5) Define Asepsis. Write down the main methods of preservation of food by high temperature. Also explain the importance of food preservations.
- 6) What is the principle of preservation of food using low temperature? Describe the methods use in this method. Write the factor to consider in refrigeration/chilling storage.
- 7) Define drying and its methods. What are the factors that influence drying?
- 8) What is lacquering? Describes types of lacquers and advantage of exhausting.
- 9) What is blanching? Describe types of blanchers in food industry?
- 10) Define food additives. Describe some of the common chemical preservatives and their mode of action for food preservation.
- 11) What is Hurdle technology? Write advantage and disadvantage of hurdle technology. What are the commonly used hurdles? List the physical and physico chemical hurdle.
- 12) Describe the historical development of Food Processing and preservation.
- 13) What is canning? Describe the types of canning. How canning can preserve foods?



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Marks Scored:

Level : B.Tech.

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Exam Roll No.:

Time: 30 mins.

Course : BIOT 416

Semester: I

F.M. : 20

Registration No.:

Date MAR 15 2018

SECTION "A"

[20 Q × 0.75= 15 marks]

1. Ultra-high temperature (UHT) pasteurization: Heating of milk at.....
 35°C to 40°C for 2 to 4 seconds. 135°C to 140°C for 2 to 4 seconds.
 100°C to 140°C for 2 to 4 seconds. 135°C to 170°C for 2 to 4 seconds.
2. High temperature short time (HTST) pasteurization is also called
 Canned sterilization Batch pasteurization
 Thermization Flash pasteurization
3. Acidulants are:
 Sulphites Sulphur dioxides Benzoic acid Sugar
4. Antioxidants are
 Butylated Hydroxy Toluence Benzoic acid
 Sorbic acid Lactic acid
5. Chemical method of reducing food deterioration is
 Salting Irradiation
 Lactic fermentation Cooling
6. The Intrinsic factor of food is
 Temperature Atmosphere
 Relative humidity Nutrients
7. Removal of unwanted outer layers of potato is
 Slicing Chopping Liquefaction Peeling
8. The leakage of water from a gel is
 Freezer Burn Syneresis
 Liquefaction Cryogenic Liquids
9. The pH of low acid food
 pH > 5.3 pH < 5.3 pH < 7.3 pH = 5.3
10. Which one is the Class I type preservative?
 Spices Sorbates Glutamates Nitrites
11. Plant origin food preservative is
 Defensin Pleurocidin Cardamom Nitrites
12. Which enzyme is responsible for the browning of fruits?
 Thiaminase Proteases Pectic enzyme Peroxidase

13. Which of the following has highest respiration rate?
 Onions Tomatoes Garlics Mushrooms
14. The main type of lacquer in canning is
 SR Lacquer AR Lacquer Pectic enzyme Thiaminase
15. The first dehydrator for drying fruits and vegetables was introduced in in 1795.
 Russia France USA Japan
16. The example of Emulsifiers is
 Lecithin Syrup Sugar Fructose
17. Ancient methods of food preservation include
 Pasteurizing and sterilizing. Canning, blanching, and irradiating.
 Freezing and boiling. Drying, smoking, and fermenting.
18. Food additives may be used to
 Destroy nutrients. Disguise faulty products.
 Deceive customers. Enhance appearance
19. The main advantage of fermentation is
 Preservation aids Influence microbial growth
 Bring chemical change Produce nutritious food
20. The most heat resistant bacteria in main is
 Lactobacillus lactis *Clostridium botulinum*
 Pediococcus acidilactici *Streptomyces natalensis*

SECTION "B"

[10 Q.× 0.5= 5 marks]

Fill in the blanks.

21. The most commonly used Radiation source is
22. Milk fermentation is carried out by
23. BHA stands for
24. The treatment of vegetables in hot water or steam to inactivate oxidative enzymes is called
25. Foods damage caused by ice sublimating or evaporating out of a frozen food product is called
26. 'Reuterin' food preservative is produced by
27. The process of canning is sometimes called
28. The cold point of liquid food inside metal can is at
29. Low temperature long time (LTLT) pasteurization is also called
30. The enzyme responsible for Hydrolytic rancidity