

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034



M.Sc. DEGREE EXAMINATION – BIOTECHNOLOGY

THIRD SEMESTER – NOVEMBER 2019

16/17/18PBT3ID01 – PRINCIPLES OF FOOD PROCESSING

Date: 04-11-2019

Dept. No.

Max. : 100 Marks

Time: 09:00-12:00

PART – A

Answer ALL the Questions

(5 x 1= 5 Marks)

I. Choose the correct answer

1. What is the size of openings of a coarse screen?
a) 6mm-150mm b) 150-200mm c) >200mm d) < 6mm
2. The process of preserving food by rapid freezing followed by dehydration under vacuum is called
a) Lyophilisation b) Sterilization c) Cold Dehydration d) Cryopreservation
3. Which among the following is not a cereal?
a) Rice b) Wheat c) Gram d) Maize
4. Pasteurization temperature ranges of milk
a) 63°C for 30 min (or) 72°C for 15 sec b) 64°C for 35 min (or) 71°C for 19sec
c) 68°C for 40 min (or) 73°C for 25sec d) 76°C for 23 min (or) 73°C for 26sec
5. Statement 1: A lot of changes take place in meat on storing at a chilled temperature. These change muscle to meat.
Statement 2: The above process is called ageing or conditioning.
a) True, False b) True, True c) False, False d) False, True

II. State whether the following are true or false.

(5 x 1= 5 Marks)

6. Dry fruits and seeds are the most important higher plant structures used as food.
7. Freezing temperatures retard the action of bacteria and mold.
8. Kesari Dhal will have anti-nutritional factors
9. Fermented foods are easy to digest.
10. Saur kraut is not a fermented vegetable.

III. Complete the following

(5 x 1= 5 Marks)

11. The microorganisms of concern in refrigerated foods are _____.
12. The temperature required to bring tenfold change in thermal death time is called _____
13. Enzymatic browning due to the oxidation of phenols is _____.
14. Parched grains are sieved to remove _____ and winnowed to remove _____
15. _____ membrane acts as a protective layer for egg surface.

IV. Answer the following, each within 50 words

(5 x 1= 5 Marks)

16. What is radappertization?
17. What is D value?
18. Differentiate pasteurization and sterilization.
19. Define the batch fermentation process.
20. What is conching?

PART B

Answer the following, each within 500 words.

(5 x 8 = 40 marks)

Draw diagrams wherever necessary

21. (a) Give a brief account of size reduction in food processing
OR
(b) Explain the different liquid liquid separation processes in food processing.
22. (a) Explain food preservation by heat
OR
(b) What is non thermal food preservation? Explain.
23. (a) Explain extrusion technology.
OR
(b) Explain the extraction steps adopted in oil seeds processing.
24. (a) Describe the parching and puffing of cereal grains
OR
(b) Enumerate the microbial growth curve pattern in both batch and continuous fermentation process.
25. a) Discuss the technological aspects of fish processing.
OR
b) Comment on the microbes associated with food fermentations with regards to
i) Idly ii) Cabbages iii) Yogurt iv) cheese

PART – C

Answer any TWO of the following, each within 1500 words.

(2 x 20 = 40 Marks)

Draw diagrams wherever necessary.

26. Write in detail on the principles of HACCP. Add a note on the functioning of HACCP team.
27. Explain in detail processing and preservation of food by drying.
28. Discuss the post mortem changes happening in Meat during processing.
29. Comment diagrammatically the egg formation with its abnormalities.

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