

Reg. No. :

Name :

Sixth Semester B.Sc. Degree Examination, March 2020

Career Related First Degree Programme under CBCSS

Group 2(a) Botany and Biotechnology

BB 1671 : FOOD AND INDUSTRIAL BIOTECHNOLOGY

(2015 Admission Onwards)

Time : 3 Hours

Max. Marks : 80

SECTION – A

Answer **all** questions in a **word** or **one or two** sentences. **Each** question carries **1** mark.

1. Define freeze drying.
2. What is a fluidized bed reactor?
3. Name any two microbial cultures used for cheese production.
4. Define immobilized cells.
5. What is pasteurization?
6. Name any two upstream process used in industrial fermentation.
7. What is the method of sterilization adopted for thermolabile media?
8. What is the function of baffles in a fermenter?

9. Mention the major causes of food spoilage.
10. What are spargers?

(10 × 1 = 10 marks)

SECTION – B

Answer **any eight** questions. **Each** question carries **2** marks. (Answer **not** to exceed **one** paragraph).

11. Discuss the various applications of protease and amylase.
12. Differentiate between chemostat and turbidostat culture.
13. What are the factors affecting the growth of spoilage microorganisms?
14. Name the microbes involved in the spoilage of fresh fish.
15. What are mycotoxins? Mention two examples with their mode of action.
16. What are SCPs? Give examples.
17. Differentiate between primary and secondary screening.
18. Name four human pathogenic microorganisms occurring in milk and milk products.
19. Explain how radiation can act as a preservation methods.
20. Name any two chemical preservatives and its mode of action.
21. Explain the various phases of a typical bacterial growth curve.
22. What is the difference between an ale and a larger?

(8 × 2 = 16 marks)

SECTION – C

Answer **any six** of the following. (Answer not to exceed **120** words). Each question carries **4** marks.

23. Comment on the non-bacterial spoilage of canned foods.
24. Differentiate between synthetic and complex media. Give examples.
25. Comment on biomass production by Solid State Fermentation.
26. Briefly describe the industrial production of alcohol by fermentation.
27. Write short note on microbial production of Vitamin-B₁₂.
28. Write a brief note on the applications of immobilized enzymes.
29. Explain the industrial production of cheese making.
30. Define the characteristics of an ideal production media.
31. What are the advantages of fermentation for a food product?

(6 × 4 = 24 marks)

SECTION – D

Answer **any two** questions (Not more than **three** pages). Each question carries **15** marks.

32. What are the different down stream processing methods adopted for cell separation in industrial biotechnology.
33. Explain briefly the various process parameters to be controlled during a fermentation process.
34. Discuss the various methods used for food preservation.
35. Write an essay on the screening and isolation of industrially important microorganisms.

(2 × 15 = 30 marks)