



(Pages : 3)

G – 1600

Reg. No. :

Name :

Sixth Semester B.Sc. Degree Examination, April 2019
(Career Related First Degree Programme under CBCSS)
Group 2 (a) Botany and Biotechnology
BB1671 : 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.

Draw diagrams only if specified in the question.

1. Define Solid State Fermentation.
 2. Name any two microorganism that causes food spoilage.
 3. What are baffles ?
 4. What is dry heat sterilization ?
 5. Define SCP.
 6. What are mycotoxins ? Give examples.
 7. What are antifoam agents ? Give an example.
 8. Differentiate between Brewer's yeast and Baker's yeast.
 9. Name any two microbial strains used for industrial production of citric acid.
 10. Name the parts of an aeration-agitation system associated with a typical stirred tank reactor.
- (1×10=10 Marks)**

P.T.O.

SECTION - B

Answer **any 8** questions. **Each** question carries **2** marks. Answer **not** to exceed **one** paragraph.

11. Differentiate between wine and beer.
12. What is the difference between pasteurization and sterilization ?
13. Differentiate batch and continuous fermentation.
14. Discuss about the spoilage of fish and fish products.
15. Explain the differences between food spoilage and food poisoning.
16. What are the different methods of pasteurization ?
17. Write briefly on butanol production using microorganisms.
18. Differentiate between upstream and downstream processing.
19. What are probiotics ? Give examples.
20. Comment on any two chemical methods adopted for product separation from fermented broth.
21. What are the advantages of fermentation for a food product ?
22. What are the applications of immobilized cell reactors ?

(2×8=16 Marks)

SECTION - C

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

23. Narrate the usefulness of microbial enzymes in food industry.
24. Describe briefly on the different types of bioreactors.
25. Comment on biomass production by Solid State fermentation.



26. Describe the microbial production and purification of Penicillin.
27. Write a brief note on the various media sterilization methods adopted for industrial fermentation.
28. Explain the method adopted for cheese production and its ripening.
29. Discuss the various chromatographic techniques used in downstream processing.
30. Describe briefly the cause and prevention methods of spoilage in canned foods and meat.
31. Explain how radiation can act as a food preservation method. (4×6=24 Marks)

SECTION – D

Answer **any 2** questions (**Not** more than **three** pages). **Each** question carries **15** marks.

32. Discuss in detail the principles and methods of food preservation.
 33. Explain briefly the various process parameters to be controlled during a fermentation process.
 34. Give a detailed description on the microbial production of citric acid and its purification.
 35. Describe in detail the spoilage of milk and milk products. (15×2=30 Marks)
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