



MAR IVANIOS COLLEGE (AUTONOMOUS)
THIRUVANANTHAPURAM

Reg. No. :

Name :

Sixth Semester Career Related B.Sc. Degree Examination, April 2018

First Degree Programme under CBCSS

Vocational Course – X: (for Botany and Biotechnology)

AUBB651: Industrial Biotechnology

(Common for **Regular** – 2015 and **Reappearance** – 2014 Admn.)

Time: 3 Hours

Max. Marks: 80

SECTION – A

Answer ALL the following in a word or one or two sentences.

1. Organism involved in the production of penicillin.
2. Alcoholic fermentation.
3. Sauerkraut.
4. TA spoilage.
5. SSF.
6. Lysozyme.
7. *Saccharomyces cerevisiae*.
8. Auxanography.
9. Brewing.
10. Two enzymes used in food industry.

(10 × 1 = 10 Marks)

SECTION – B

Answer any EIGHT questions, not exceeding a paragraph.

11. Explain continuous fermentation.
12. Tower fermentor.
13. A headspace is left in a bioreactor before starting fermentation. Why?
14. What is the difference between fermentation and respiration.
15. Define mycotoxin. Give an example.
16. What are the uses of antifoaming agents? Mention any two.
17. What is the use of Roux bottle?

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18. Explain upstream process.
19. Differentiate putrefaction and taint.
20. What are baffles?
21. What are super critical fluids?
22. Mention the use of rotary drum filters.

(8 × 2 = 16 Marks)

SECTION – C

*Short essay type : Answer any **SIX** questions.*

23. Some products of fermentation are seen inside the microbial cells. How can you extract these?
24. Write a short note on the production of curd.
25. Write a short note on the bioreactors used for animal culture.
26. How will you preserve food from spoilage?
27. Write down the methods used for the liquid-liquid separation in DSP.
28. Differentiate aeration and agitation.
29. Briefly explain the microbial production of vitamins.
30. What do you mean by the scale up of biological reactions into bioprocess?
31. Explain the spoilage of meat.

(6 × 4 = 24 Marks)

SECTION – D

*Long essay type : Answer any **TWO** questions.*

32. Explain various screening techniques employed for the isolation of industrially important microorganism.
33. What is SCP? What are the uses of SCP? Mention the production of any one of them.
34. Explain the various techniques employed in the preservation of food.
35. Define immobilization and describe various techniques employed for immobilisation.

(2 × 15 = 30 Marks)