

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034



B.Sc. DEGREE EXAMINATION – PLANT BIOLOGY AND PLANT BIOTECHNOLOGY

SIXTH SEMESTER – APRIL 2022

16/17/18UPB6MC03 – MICROBIAL TECHNOLOGY

Date: 20-06-2022

Dept. No.

Max. : 100 Marks

Time: 01:00 PM - 04:00 PM

PART – A

(10 x 2=20 Marks)

ANSWER THE FOLLOWING, EACH WITHIN 50 WORDS.

1. What is Biomass? Add a note on its applications.
2. Mention the uses of baffles.
3. List any 4 organisms used in enzyme production.
4. What is protoplast fusion?
5. List out the importance of *Spirulina*.
6. What is a Mycoprotein? Give an example.
7. What are attenuated vaccines?
8. What is the role of Vitamin B₁₂ in human health?
9. What is a Biofuel?
10. State the applications of amylase enzyme.

PART – B

(5 x 7=35 Marks)

ANSWER THE FOLLOWING, EACH WITHIN 500 WORDS; DRAW DIAGRAMS / FLOWCHARTS WHEREVER NECESSARY.

11. a) Write notes on the methods used in the isolation of industrially important microorganisms.
(OR)
b) Give a general account on primary and secondary metabolites.
12. a) Write notes on Medium composition and medium formulation.
(OR)
b) Explain the parts of a CSTR.
13. a) Give an account on SCP as food and feed.
(OR)
b) Write notes on cheese production.
14. a) Explain how insulin is produced through genetic engineering.
(OR)
b) Mention the steps involved in the production of Streptomycin.
15. a) Explain the process of citric acid production.
(OR)
b) Give an account on biopolymers and their production.

**ANSWER ANY THREE OF THE FOLLOWING, EACH WITHIN 1200 WORDS;
DRAW DIAGRAMS AND FLOW CHARTS WHEREVER NECESSARY.**

16. Explain the methods involved in the preservation of industrially important microbes.
17. Discuss the methods for strain improvement of microorganisms.
18. Give an account of Beer and wine production.
19. Explain the production of Hepatitis B Vaccine.
20. Discuss in detail about biofertilizers.

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