

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034



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

SIXTH SEMESTER – NOVEMBER 2016

PB 6613 – MICROBIAL TECHNOLOGY

Date: 15-11-2016

Dept. No.

Max. : 100 Marks

Time: 09:00-12:00

PART A

Answer the following, each within 50 words only.

(10x 2=20marks)

1. What is primary metabolite?
2. What is Recombinant technology?
3. Explain the term asepsis.
4. Mention the function of Autoclave.
5. Write the importance of Chlorella?
6. Give examples of mycoprotein.
7. Mention the Contribution of Sir Alexander Fleming.
8. What are steroids?
9. Define –bioplastics.
10. What are amino acids?

PART B

Answer the following, each within 500 words. Draw diagrams wherever necessary.

(5x7=35marks)

11. a) Explain the isolation of industrially important microbes.
(OR)
b) Give an account of the range of fermented products used in food industry.
12. a) Write notes on the substrates used for media preparation during fermentation.
(OR)
b) Give an account of impellers and spongers.
13. a) Explain the mass cultivation of *Spirulina*.
(OR)
b) How is fermentation of beer different from that of wine.
14. a) Write notes on commercial production of Penicillin..
(OR)
b) Give the protocol for production of insulin through recombinant DNA technology.
15. a) Explain the applications of amylase, protease and lipase.
(OR)
b) Biofertilizers - a boon to the field of agriculture.

PART C

Answer any **THREE** of the following, each within 1200 words. Draw diagrams wherever necessary.

(3x15=45marks)

16. Give a general account on microbial biomass and its applications.
17. Explain in detail any two types of fermentors you have studied. And add a note on its functions.
18. Define fermentation. Add a note on yogurt and cheese production.
19. What are vitamins? Elaborate the production of vitamin B₁₂.
20. Describe the commercial production of citric and acetic acid.
