LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

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

SIXTH SEMESTER – APRIL 2017

PB 6609- FERMENTATION TECHNOLOGY

Date: 20-04-2017 Dept. No. Max. : 100 Marks
01:00-04:00

PART – A

Answer the following, each within 50 words. **(10 x 2 = 20 marks)**

01. What is an enzymes?
02. Define biomass?
03. What is synthetic media?
04. Write notes on fed batch culture.
05. What are impellers?
06. What are bioreactors?
07. Mention the importance of pH in fermentation.
08. What are secondary metabolites?
09. What is Bioconversion?
10. Write notes on Chemostat.

PART – B

Answer the following, each within 500 words. Draw diagrams and flow charts wherever necessary. **(5 x 7 = 35 marks)**

11a. Briefly explain about recombinant products.

(OR)

b. Write an account on microbial biomass.

12a. Describe the microbial growth kinetics in Batch culture.

(OR)

b. Explain the various methods on sterilization of media.

13a. Describe the methods of preservation of microbes.

(OR)

b. Explain the role of aerator and agitator in a fermenter.

14a. Explain the methods of measuring pH and temperature.

(OR)

b. Enumerate the applications of computer in the fermentation process.

15a. Write notes on chromatography in purification of products.

(OR)

b. Explain in detail about foam separation.

PART – C

*Answer **any three** of the following, each within 1200 words. Draw diagrams and flow charts wherever necessary.* **(3 x 15 = 45 marks)**

16. Describe the industrial production and applications of microbial enzymes.

17. Write an account on isolation, preservation and optimization of industrially important microorganisms.

18. Explain the different types of fermenter.

19. Discuss the types and applications of biosensor.

20. Give a detailed account on product recovery.

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