



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

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

SIXTH SEMESTER – APRIL 2016

PB 6610 - ENVIRONMENTAL BIOTECHNOLOGY

Date: 15-04-2016
Time: 09:00-12:00

Dept. No.

Max. : 100 Marks

PART A

Answer the following, each within 50 words only.

(10 x 2 = 20 marks)

1. Define Biological oxygen demand.
2. What is silaging?
3. Mention the objectives of waste water treatment.
4. What are oxidation ponds?
5. Define bioremediation.
6. What is composting?
7. What are xenobiotics?
8. Write short notes on super bug.
9. Define radionuclide.
10. What is Biofilm?

PART B

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

(5 x 7= 35 marks)

11. a. Distinguish between lentic and lotic aquatic systems.
(or)
b. Briefly write about alternate energy resources.
12. a. Describe biodegradation of oil spill.
(or)
b. Write detailed notes on the removal of heavy metals using microbes.
13. a. Explain the various phytoremediation techniques.
(or)
b. Describe the structure of any two reactors used in bioremediation.
14. a. Describe the process of biodegradation of polychlorinated biphenyls.
(or)
b. What is biofiltration? Give a brief account on bio-filters.
15. a. Write notes on microbial and multicellular bioremediation.
(or)
b. Give an account of structure and development of biofilm.

PART C

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

(3 x 15= 45 marks)

16. Describe various steps involved in the production of biogas.
17. Write an essay on biological treatment of waste water.
18. Explain the *in situ* and *ex situ* bioremediation.
19. Give a detailed account of biodegradation of Phenol and Pentachlorophenol.
20. What is bioleaching? Describe bioleaching of Uranium and Copper.
