

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034



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

SIXTH SEMESTER – NOVEMBER 2016

PB 6614 – ECOLOGY & ENVIRONMENTAL BIOTECHNOLOGY

Date: 16-11-2016

Dept. No.

Max. : 100 Marks

Time: 09:00-12:00

PART – A

ANSWER THE FOLLOWING, EACH WITHIN 50 WORDS ONLY

(10X2=20)

1. What is energy flow?
2. Give a brief account on ecads.
3. What is heavy metal pollution?
4. What is silaging?
5. What is phytoremediation?
6. What is bioaccumulation?
7. What is a biofilm?
8. What is activated sludge?
9. What is a xenobiotic?
10. What are the ill effects of radionuclides?

PART – B

ANSWER THE FOLLOWING, EACH ANSWER WITHIN 500 WORDS, DRAW DIAGRAMS WHEREVER NECESSARY

(5X7=35)

11. a. Describe the various types of microbial communities.

(OR)

b. Briefly describe the importance of abiotic factors in an ecosystem.

12. a. Describe the ill-effects of air pollution.

(OR)

b. Discuss the importance of renewable energy resources.

13. a. Summarise the factors that influence bioremediation.

(OR)

b. Differentiate *in situ* and *ex situ* bioremediation.

14. a. Briefly summarise the removal of oil spills.

(OR)

b. Give an account of microbial metal resistance mechanisms.

15. a. What are radionuclides? Add a note on the uptake of radionuclides from polluted sites.

(OR)

b. Write an account on purification of air by bio filters.

PART – C

**ANSWER ANY THREE OF THE FOLLOWING, EACH WITHIN 1200 WORDS,
DRAW DIAGRAMS WHEREVER NECESSARY. (3x15=45)**

16. Write detailed notes on Biodiversity and Conservation.
17. Describe the methods of biogas and hydrogen gas production and their significance.
18. Describe the different types of bioreactors used in bioremediation.
19. Explain biological treatment of waste water.
20. Describe the degradation of phenols and pentachlorophenol.
