



LOYOLA COLLEGE (AUTONOMOUS) CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION
PLANT BIOLOGY AND PLANT BIOTECHNOLOGY
SIXTH SEMESTER – APRIL 2025



UPB 6503 – ECOLOGY AND ENVIRONMENTAL BIOTECHNOLOGY

Date: 30-04-2025

Dept. No.

Max. : 100 Marks

Time: 09:00 AM - 12:00 PM

SECTION A

Answer ANY FOUR of the following, each within 500 words.

Draw diagrams / flowcharts wherever necessary.

4 x 10 = 40 Marks

1. Write an account on the grass land ecosystem.
2. Explain the types of biodiversity and its importance.
3. Give an account on the process of composting.
4. Describe the different types of microbial metal resistance mechanisms.
5. Explain various mechanisms involved in bioremediation.
6. Describe the methods used for the biological degradation of petroleum hydrocarbon.
7. Write briefly about *ex situ* bioremediation.
8. Give an account on purification of polluted air using bio-filters.

SECTION B

Answer ANY THREE of the following, each within 1000 words.

Draw diagrams / flowcharts wherever necessary.

3 x 20 = 60 Marks

9. Write an essay on the structural and functional components of an ecosystem.
10. Describe the *in situ* and *ex situ* conservation of biological diversity.
11. Give a detailed account on non-conventional energy resources.
12. Describe the structure and working of trickling filter and activated sludge unit.
13. Explain biological degradation of any two xenobiotics you have studied.
14. Describe the causes, consequences and control measures of air pollution.

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