

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034



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

SIXTH SEMESTER – APRIL 2023

UPB 6503 – ECOLOGY AND ENVIRONMENTAL BIOTECHNOLOGY

Date: 05-05-2023

Dept. No.

Max. : 100 Marks

Time: 09:00 AM - 12:00 NOON

PART A

Answer the following, each within 50 words

(10 × 2 =20 marks)

1. Define ecads.
2. Differentiate food chain from food web.
3. State the goals of convention of biological diversity.
4. List the role of CGIAR.
5. What is biomagnification?
6. Comment on PAN pollutants.
7. What is phycoremediation?
8. Define biostimulation.
9. Comment on superbug.
10. What is biofilm?

PART B

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

(5 ×7 = 35 marks)

11. a. Explain the various types of ecological pyramids.
(or)
b. List out the edaphic factors of an ecosystem.
12. a. Write notes on Vavilov's Centres of origin of cultivated crop plants.
(or)
b. Discuss briefly about the human diversity and indigenous peoples.
13. a. Write short notes on water pollution and their impacts on ecosystem.
(or)
b. Explain how the waste products are recycled in the environment.
14. a. Write briefly about *ex situ* bioremediation methods.
(or)
b. Describe the various types of phytoremediation techniques.

15. a. Give an account on role of biofilters in purification of air.

(or)

b. Write an account on the removal of heavy metals and pesticides by biosorption.

PART C

Answer any **THREE** of the following, each within **1200** words.

Draw diagrams / flowcharts wherever necessary.

(3 × 15 = 45 marks)

16. Analyse the structural and functional components of an ecosystem.

17. Write an essay on the conservation of biodiversity.

18. Write in detail about non-conventional energy resources.

19. Elaborate on types of reactors used in bioremediation.

20. Write in detail about the biological treatment of sewage.
