

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034



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

SIXTH SEMESTER – NOVEMBER 2022

UPB 6503 – ECOLOGY AND ENVIRONMENTAL BIOTECHNOLOGY

Date: 02-12-2022

Dept. No.

Max. : 100 Marks

Time: 01:00 PM - 04:00 PM

PART – A

(10 x 2 = 20 Marks)

Answer the following, each within 50 words.

1. Define ecology.
2. What are ecotypes?
3. List out the roles of FAO.
4. Define hotspots.
5. What is thermal pollution?
6. Write a note on silaging.
7. What is Phycoremediation?
8. What is biosparging?
9. Define biosorption.
10. What are superbugs?

PART – B

(5 X 7 = 35 Marks)

Answer the following, each within 500 words; Draw diagrams and flowcharts wherever necessary

11. (a) Give a brief account on development of biofilm

OR

- (b) What are the various types of ecological pyramids.

12. (a) Write notes on genetic, species and ecological diversity.

OR

- (b) Write a brief account on centers of origin of cultivated plants.

13. (a) Write the causes and consequences of air pollution. Add a note on methods to reduce air pollutants.

OR

- (b) Give a brief account on composting.

14. (a) Briefly discuss about various techniques used in *in situ* bioremediation.

OR

- (b) Describe different types of bioremediation mechanisms.

15. (a) Explain briefly about biodegradation of any one xenobiotics you have studied.

OR

- (b) What is biofiltration? Describe the structure of biofilters and biosubstrates.

PART – C

(3 X 15 = 45 Marks)

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

16. Describe the structure of a pond ecosystem.
17. Write an essay on various strategies used in the conservation of biological diversity.
18. Give an account of non conventional energy resources.
19. Describe the various types of phytoremediation techniques.
20. Give a detailed account on biological treatment of waste water.

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