



**LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034**

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

**SIXTH SEMESTER – APRIL 2019**

**16UPB6MC04– ENVIRONMENTAL BIOTECHNOLOGY**

Date: 13-04-2019  
Time: 09:00-12:00

Dept. No.

Max. : 100 Marks

**PART- A**

**Answer the following, each within 50 words.**

**(10 x 2=20marks)**

1. What is a biosphere?
2. Mention the sources and effects of air pollution.
3. What is microbial bioremediation?
4. What are environmental bioreactors?
5. What is a rotating biological contactor?
6. Define biosorption.
7. Mention the sources of Polycyclic Aromatic Hydrocarbons.
8. Define xenobiotics.
9. What is biomining?
10. What are biopesticides? Give two examples.

**PART- B**

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

**(5 x 7=35 marks)**

11. a) What are the sources of heavy metal pollutants? Add a note on their impact.

**(OR)**

b) Give an account on Biosphere.

12. a) Differentiate *ex-situ* from *in-situ* bioremediation.

**(OR)**

b) Highlight the role of microbes in bioremediation.

13. a) Comment on Oxidation ponds as a tool for wastewater treatment.

**(OR)**

b).Elucidate the role of microbes in the removal of oil spills.

14. a) What are the hazards posed by xenobiotic compounds?

**(OR)**

b) Explain microbial degradation of phenol.

15. a) List the advantages and disadvantages of bioleaching

**(OR)**

b) Give an account of bioleaching of gold

## PART- C

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

(3 x 15=45 marks)

16. With reference to air pollution discuss on the following:-

i) pollutants      ii) sources      iii) impact on health

17. Describe in detail the process of phytoremediation.

18. Elaborate on activated sludge process.

19. Explain biosorption, bioaccumulation and biomineralization of radionuclides from polluted sites.

20. Give a detailed account on biodegradable plastics.

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