



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

M.Sc.DEGREE EXAMINATION –BIOTECHNOLOGY

SECOND SEMESTER – APRIL 2019

18PBT2MC03–ENVIRONMENTAL BIOTECHNOLOGY

Date: 09-04-2019

Dept. No.

Max. : 100 Marks

Time: 01:00-04:00

PART – A

Answer ALL the Questions

I. Choose the correct answer

(5 x 1 = 5 Marks)

1. An intermediate zone formed between two adjacent biomes is
a) Ecesis b) Ecotone c) Ecosystem d) Ecotype
2. The causative agent of Ouch- Ouch sickness is
a) Methyl mercury b) Dimethyl mercury c) Trimethyl mercury d) Diethyl mercury
3. Who discovered Super Bug
a) Watson b) Crick c) Fleming d) Chakraborty
4. Biogas consist of
a) Methane & CO₂ b) Ethane & CO₂ c) Ethylene & CO₂ d) Methane & O₂
5. The study of genetic material recovered directly from environmental samples is known as
a) Genomics b) Metagenomics c) Proteomics d) Metabolomics

II. State whether the following are true or false.

(5x1=5 Marks)

6. A series of percentage of all life forms of all plants in a community is known as Phenogram.
7. Radioactive waste that enters the food chain and mimics Calcium is Uranium 232
8. *Bioventing* is an *in situ* remediation technology that uses microorganisms
9. Biogas plant is a very good example for aerobic fermentation
10. Bioleaching is the extraction of metals from their ores through the use of living organisms.

III. Complete the following

(5 x 1= 5 Marks)

11. _____ is the environment where an organism lives.
12. The most polluted city in the World is _____.
13. Acid rain is a _____ pollutant.
14. _____ is Earth's protective umbrella.
15. _____ is a form of phytoremediation that involves filtering contaminated groundwater, through a mass of roots to remove toxic substances.

IV. Answer the following within 50 words

(5 x 1 = 5 Marks)

16. Name any two wildlife sanctuaries
17. What is meant by GIS?
18. Write a note on Bhopal tragedy
19. Define bio-magnification
20. What do you understand by Itai- Itai disease?

PART B

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

(5 x 8 = 40 Marks)

21. (a) Explain different types of niche with suitable illustration.

OR

(b) Enlist the features of k- selected species and r- selected species.

22. (a) Enumerate the effects of air pollutant on environment.

OR

(b) Narrate the rules to regulate environmental pollution.

23. (a) Write down the sources and effects of Xenobiotics

OR

(b) Write down the steps involved in the treatment of distillery effluents.

24. (a) Bring out the health impacts of solid waste.

OR

(b) What are the consequences of hazardous health care waste?

25. (a) Give a brief account on genetic aspects of heavy metal resistance.

OR

(b) Discuss various strategies for biodegradation of pesticides

PART – C

Answer any TWO of the following, each within 1500 words.
Draw diagrams wherever necessary.

(2 x 20 = 40 Marks)

26. Discuss various Off-site strategies of Biodiversity conservation.

27. Write down the causes and effects of the following case study

(i) Minamata disease (ii) Kerala endosulfan tragedy

28. Discuss the sources, effects and control measures of marine pollution.

29. Describe the principle, methods and uses of phytoremediation.
