

**STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086**  
**(For candidates admitted during the academic year 2019 – 2020 & thereafter)**

**M. Sc. DEGREE EXAMINATION - NOVEMBER 2023**  
**BIOTECHNOLOGY**  
**THIRD SEMESTER**

**COURSE : CORE**  
**PAPER : ENVIRONMENTAL BIOTECHNOLOGY**  
**SUBJECT CODE : 19BY/PC/ET34**  
**TIME : 3 HOURS** **MAX. MARKS: 100**

**SECTION – A**

**ANSWER ALL QUESTIONS** **(10 x 2 = 20)**

1. Explain biotic environment.
2. Define ecotone.
3. Explain ozone depletion.
4. What is meant by oxidation pond?
5. Define biomedical waste.
6. Explain vermicomposting.
7. What is GMO?
8. Define metagenomics.
9. Define xenobiotics.
10. Explain bioelectricity.

**SECTION – B**

**ANSWER ALL THE QUESTIONS** **(5 x 8 = 40)**

11. a. Explain different levels of species diversity.  
(or)  
b. Write about the concept of meta population.
12. a. State different treatment stages of sewage and waste water.  
(or)  
b. State the application of remote sensing and GIS in monitoring the environment.
13. a. Explain the features of the waste generated by paper and pulp industry.  
(or)  
b. Explain different types of solid waste composting.
14. a. Explain the role of rDNA technology in waste treatment.  
(or)  
b. Write an essay on nanoscience in environmental management.
15. a. Highlight the salient features in bioremediation of petroleum hydrocarbon.  
(or)  
b. Write an essay on bioleaching.

**SECTION – C**

**ANSWER ANY TWO QUESTIONS:**

**(2 x 20 = 40)**

16. Write an essay on niche.
17. Explain air pollution and their control methods.
18. How do you develop biosensors to monitor environmental pollution.
19. Write an essay on phytoremediation.

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