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

SUBJECT CODE: 19BY/PC/ET34

M. Sc. DEGREE EXAMINATION - NOVEMBER 2022

BIOTECHNOLOGY THIRD SEMESTER

COURSE : CORE

PAPER : ENVIRONMENTAL BIOTECHNOLOGY

TIME : 3 HOURS MAX. MARKS: 100

SECTION - A

ANSWER ALL QUESTIONS:

 $(10 \times 2 = 20)$

- 1. What are Edges?
- 2. Explain GIS.
- 3. Write on Greenhouse gases.
- 4. Write a note on Biosensors.
- 5. What is Composting?
- 6. Why are Bio-indicators important to the environment?
- 7. Write a note on Incineration method.
- 8. What is Phytoconcentration?
- 9. Expand MFC
- 10. What is Recalcitrance?

SECTION - B

ANSWER ALL THE QUESTIONS:

 $(5 \times 8 = 40)$

11. (a) Explain the concept of metapopulation.

(or)

- (b) Give an account on resource partitioning.
- 12. (a) Elaborate on application of biotechnology for conservation of environment

(or)

- (b) Briefly explain the different types of pollution.
- 13. (a) Write a note on waste management in paper and pulp industry.

(or)

- (b) Explain the process of vermicomposting in detail.
- 14. (a) Describe biodegradation of hydrocarbon and its pathway.

(or)

- (b) Discuss the role of microbes in bioleaching.
- 15. (a) Illustrate with examples the role of nano-science in environment management.

(or

(b) Explain the importance of GMO's in waste management.

SECTION - C

ANSWER ANY TWO QUESTIONS:

 $(2 \times 20 = 40)$

- 16. Discuss population ecology in detail.
- 17. Describe wastewater treatment in detail.
- 18. Elaborate on the use of Molecular Biology tools in environment management.
- 19. Explain degradation of xenobiotic substances and is applications.
