

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

SUBJECT CODE: 19ZL/MC/FB54

B.Sc. DEGREE EXAMINATION - NOVEMBER 2022
BRANCH VI A – ADVANCED ZOOLOGY & BIOTECHNOLOGY
FIFTH SEMESTER

COURSE : MAJOR CORE

PAPER : FUNDAMENTALS OF BIOTECHNOLOGY

TIME : 3 HOURS

MAX. MARKS: 100

SECTION – A

ANSWER ALL QUESTIONS:

(10 x 3 = 30)

1. Mention the functions of Restriction Enzymes.
2. What is Passenger DNA?
3. Comment on electroporation technique.
4. What is a DNA library?
5. Highlight the importance of ELISA technique.
6. What is gene therapy?
7. Differentiate between Primary and Secondary cell lines.
8. Comment on IPR.
9. Define Proteomics.
10. Enumerate any three industrial uses of enzymes.

SECTION – B

ANSWER ANY FIVE QUESTIONS:

(5 x 6 = 30)

11. Explain the Southern Blotting Technique.
12. Write about Site- directed Mutagenesis.
13. Enumerate the advantages and disadvantages of GMOs.
14. Explain Natural and Synthetic culture media.
15. Analyse the significance of the Human Genome Project.
16. Write a note on DNA fingerprinting.
17. Discuss the applications and ethical issues of Stem cell culture.

SECTION – C

ANSWER ANY TWO QUESTIONS:

(2 x 20 = 40)

18. Explain the principle and process of PCR technique..
19. Discuss gene cloning in prokaryotes.
20. Elaborate the steps involved in Hybridoma technology.
21. Describe Sanger's method of DNA sequencing and discuss its applications.
