

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086
(For Candidates admitted during the academic year 2011 – 12 & thereafter)

SUBJECT CODE: 11ZL/MC/FB54

B.Sc. DEGREE EXAMINATION - NOVEMBER 2016
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 scope and importance of Genetic Engineering.
2. Comment on “Data redundancy in Bioinformatics Databases”
3. Write a note on isoelectric focussing in electrophoresis.
4. Comment on PCR.
5. Mention the importance of gene therapy.
6. Write a note on DNA fingerprinting.
7. What are immobilized enzymes?
8. List down the drawbacks associated with the manufacture of enzymes from animal and plant sources.
9. Mention the importance of bioethics.
10. What are transgenic animals and crops?

SECTION – B

ANSWER ANY FIVE QUESTIONS:

(5 x 6 = 30)

11. Write an account on the principles of genetic engineering.
12. Enumerate points on the methods of transfer of foreign DNA into cells.
13. Briefly explain hybridoma technology.
14. Briefly analyse IVF technology in farm animals and humans.
15. Comment on applications of stem cells.
16. Explain the benefits and hazards of genetic engineering.
17. Explain antibiotic production.

SECTION – C

ANSWER ANY TWO QUESTIONS:

(2 x 20 = 40)

18. Write an essay on cloning of prokaryotes and eukaryotes.
19. Discuss the types of industrial fermenters.
20. Form an essay on enzyme production methods and explain the importance of enzyme engineering.
21. Write an account on the following:
 - a) Genetically engineered microorganisms.
 - b) Single Cell Protein (SCP)
 - c) Animal cell and tissue culture techniques.
 - d) Site directed mutagenesis.
