

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 2015
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. Comment on Taq DNA polymerase.
2. Expand the following
 - a) HPLC
 - b) ARS
 - c) RAPD
3. List the types generalised databases.
4. What are antibiotics? Name the microbe from which streptomycin is produced.
5. Comment on
 - a) Bioremediation
 - b) Site directed mutagenesis
6. Differentiate between Ribozyme, Abzymes and Synzymes.
7. Explain the term Artificial Insemination.
8. Differentiate between Pluripotency and Totipotency.
9. Outline the applications of Southern blotting.
10. What does the following mean?
 - a) Antisense therapy
 - b) Gene gun
 - c) ENTREZ

SECTION – B

ANSWER ANY FIVE QUESTIONS:

(5 x 6 = 30)

11. Discuss the enzymes used in rDNA technology.
12. Explain electroporation method of gene transfer.
13. Write about the different animal tissue culture media.
14. Give an account of gene therapy methods.
15. Discuss the steps followed in IVF technology.
16. Explain North Blotting technique.
17. Brief the role of genetically engineered microbes in oil recovery.

SECTION – C

ANSWER ANY TWO QUESTIONS:

(2 x 20 = 40)

18. Give an account of cloning vectors.
19. Write an account of SCP.
20. Write a detailed account of stem cell culture. Add a note on its applications.
21. Explain immobilization of enzymes and enumerate its applications.
