

**LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034**



**B.Sc. DEGREE EXAMINATION – ADVANCED ZOOLOGY AND BIOTECHNOLOGY**

**FIFTH SEMESTER – NOVEMBER 2018**

**AZ 5520/AZ 5514/AZ 5507 – GENETIC ENGINEERING**

Date: 02-11-2018  
Time: 09:00-12:00

Dept. No.

Max. : 100 Marks

**PART - A**

(10 x 2= 20)

**ANSWER ALL THE QUESTIONS**

1. What is a plasmid vector?
2. Define cosmid.
3. Write a note on functions of DNA.
4. What are restriction enzymes?
5. What is a bacteriophage?
6. Write a note on cDNA cloning.
7. What are probes?
8. Explain chromogenic substances.
9. Describe GMO.
10. Write a note on bioethics.

**PART – B**

(4x10=40)

**ANSWER ANY FOUR QUESTIONS**

11. Explain the structure of DNA.
12. Differentiate between prokaryotic hosts and eukaryotic hosts.
13. Give an account on alternative DNA.
14. Write short notes on
  - i. Adaptors
  - ii. Linkers:
15. Explain western blotting.
16. Comment on the socioethical problems in genetic engineering.

**PART – C**

(2 x 20 =40)

**ANSWER ANY TWO QUESTIONS**

17. Write an essay on protein structure and function.
18. Discuss in detail the role of genetic engineering in agriculture and environment.
19. Explain a) Endo and exonucleases.  
b) Terminal transferases.
20. Explain in detail a) immunological screening for expressed genes.  
b) screening using nucleic acid probes.

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