



**MAR IVANIOS COLLEGE (AUTONOMOUS)**  
**THIRUVANANTHAPURAM**

Reg. No. :.....

Name :.....

**Fifth Semester B.Sc. Degree Examination, November 2016**

**First Degree Programme under CBCSS**

**Core Course: Zoology – IV**

**AUZO542: Genetics and Biotechnology**

Time: **3 Hours**

Max. Marks: **80**

**SECTION – A**

*Answer ALL questions in one or two sentences.*

1. What is a Monohybrid cross ?
2. What is Transgene ?
3. Pleiotropism
4. RFLP
5. Codominant allele
6. What is allelic interaction ?
7. Nucleases
8. Monoclonal antibodies
9. Comment on Law of independent assortment.
10. What is an Idiogram ?

**(10 × 1 = 10 Marks)**

**SECTION – B**

*Answer any EIGHT questions, each in a short paragraph not exceeding 50 words.*

11. Briefly explain Incomplete dominance with suitable example.
12. Comment on Lyon's Hypothesis.
13. Write short notes on Plasmids.

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14. Lipofection
15. Erythroblastosis Foetalis
16. What are DNA Vaccines ?
17. Down syndrome
18. Comment on Palindrome sequence and its importance.
19. Briefly explain sex influenced gene with suitable examples.
20. Exonuclease and Endonuclease.
21. cDNA library
22. Difference between intersex and Gynandromorphs.

**(8 × 2 = 16 Marks)**

### **SECTION – C**

*Answer any SIX questions, each in a paragraph not exceeding 120 words.*

23. Briefly explain Gene libraries.
24. Write notes on Southern blotting.
25. Explain Hybridoma technology.
26. Comment on any two sex chromosomal anomalies
27. What is Pedigree analysis ? Write its significance.
28. PCR
29. Write notes on Phenylketonuria.
30. Briefly explain types of mutations.
31. Explain different types of Gene therapy.

**(6 × 4 = 24 Marks)**

### **SECTION – D**

*Answer any TWO questions, not exceeding four pages.*

32. Sanger Method of DNA sequencing – Explain.
33. Give an account of Chromosomal mechanism of sex determination.
34. Human genome Project.
35. Explain epistasis with suitable examples.

**(2 × 15 = 30 Marks)**

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