



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

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

**FIFTH SEMESTER – APRIL 2017**

**AZ 5513- GENETICS**

Date: 20-04-2017  
Time: 01:00-04:00

Dept. No.

Max. : 100 Marks

**PART – A (10 x 2 = 20 marks)**

**Answer ALL questions. All questions carry equal marks.**

Define / Explain the following:

1. Polygenic inheritance
2. Gene Mapping
3. Cistron
4. Plastid
5. Transduction
6. Conjugation
7. Pedigree analysis
8. Human Karyotype
9. Transposons
10. Planned genotypes

**PART – B (4 x 10 = 40 marks)**

**Answer any FOUR questions. All questions carry equal marks.**

11. Describe the law of Independent Assortment with example.
12. Explain the structure of DNA.
13. Describe the Lytic and Lysogenic life cycle of phages.
14. Explain the method of Bacterial recombination.
15. Describe the Hardy – Weinburg law and its significance.
16. Explain the gene therapy.

**PART – C (2 x 20 = 40 marks)**

**Answer any TWO questions. All questions carry equal marks.**

17. What is multiple alleles and describe the genetics of ABO.
18. Describe the inherited genetic disorders in human.
19. Describe the various aspects of inbreeding and out breeding.
20. Give an account on Genetic Engineering and Biotechnology.

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