

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034



B.Sc. DEGREE EXAMINATION – ADVANCED ZOOLOGY AND BIOTECHNOLOGY

FIFTH SEMESTER – NOVEMBER 2016

AZ 5518 – PRINCIPLES OF GENETICS

Date: 05-11-2016

Dept. No.

Max. : 100 Marks

Time: 09:00-12:00

PART-A

Answer All the questions

(10x2=20)

1. Explain the law of segregation.
2. What is dihybrid cross?
3. Name the nitrogenous bases of DNA.
4. What is Co-dominance?
5. Define crossing over.
6. What is MNO blood grouping?
7. What is inbreeding?
8. Explain pedigree analysis
9. What is bioethics?
10. Define alkaptonuria.

PART – B

(4x10=40)

Answer any FOUR questions

11. Explain Mendel's law of independent assortment with a suitable example.
12. Describe briefly metabolic disorders in man.
13. Stern's experiment prove that crossing over is taking place in Drosophila. Justify.
14. Explain Eugenics and Euthenics.
15. Write an account on Dominant Epistasis.
16. Describe sex linked inheritance in human with at least 2 examples.

PART – C

(2x20=40)

Answer any TWO questions

17. What are multiple alleles? Explain with the concept of ABO blood grouping.
18. Explain Hardy-Weinberg law with the factors affecting it.
19. Write short note on the followings:
 - (i) RNA structure
 - (ii) Cloning.
20. Write a detailed account on artificial insemination and amniocentesis.

\$\$\$\$\$\$