



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – ADVANCED ZOOLOGY AND BIOTECHNOLOGY

FIFTH SEMESTER – APRIL 2019

AZ 5518– PRINCIPLES OF GENETICS

Date: 15-04-2019
Time: 09:00-12:00

Dept. No.

Max. : 100 Marks

Part A

Answer All the questions: (10 X 2 = 20)

1. Define law of dominance
2. What is linkage
3. What are multiple alleles?
4. What is erythroblastosis -foetalis.
5. Define transduction
6. Define gene frequency
7. Differentiate inbreeding and out breeding
8. What is SII, RII variations?
9. What is aminocentesis?
10. Define alkaptonuria.

Part B

Answer any FOUR questions: (4 X 10 = 40)

11. Define gene interaction. Explain any one type of gene interaction.
12. Explain erythroblastosis -foetalis.
13. Define RNA. Explain its structure and function.
14. By using Stern's experiments prove that crossing over taking place in Drosophila.
15. Explain pedigree analysis.
16. Explain artificial insemination and amniocentesis in man.
17. Explain the inheritance disorder in human.
18. Explain chromosomal mapping.

Part C

Answer any TWO questions: (2 X 20 = 40)

19. State Mendel's laws of independent assortment. Explain the mechanism involved in guinea pig.
20. What is gene- enzyme relation? Prove that biological plays vital role in genetic disorders.
21. Explain three autosomal abnormalities in human.
22. Explain the bioethics by eugenics, euthenics and euphenics.

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