

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034



B.Sc. DEGREE EXAMINATION – ADVANCED ZOOLOGY AND BIOTECHNOLOGY

FIFTH SEMESTER – NOVEMBER 2017

AZ 5518 – PRINCIPLES OF GENETICS

Date: 06-11-2017

Dept. No.

Max. : 100 Marks

Time: 09:00-12:00

PART – A

Answer ALL the questions:

(10x2=20)

1. Define law of dominance.
2. What is trihybrid cross?
3. Define phenylketoneuria.
4. What is transduction?
5. Define crossing over.
6. What is MNO blood grouping?
7. What is outbreeding?
8. Explain pedigree analysis.
9. What is bioethics?
10. What is amniocentesis?

PART – B

Answer any FOUR questions:

(4x10=40)

11. Explain erythroblastosis foetalis.
12. Describe the Mendel's law of independent assortment.
13. What is meant by linkage? Explain its types.
14. Comment on sex linked genes in human.
15. Write an account on artificial insemination.
16. Write about gene therapy.

PART – C

Answer any TWO questions:

(2x20=40)

17. What are multiple alleles? Explain with the concept of ABO blood grouping.
18. Describe Hardy-Weinberg law with the factors affecting it.
19. Write short note on the followings:
 - (i) Sterns experiment to prove crossing over
 - (ii) Cloning
20. Write a detailed account on gene manipulation and its consequences.
