

20. (a) Write a detailed account on human genome project.

Or

- (b) Narrate the prenatal diagnosis.
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Reg. No. :

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M.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2011.

Thrid Semester

Zoology

MOLECULAR GENETICS

(For those who joined in July 2008 and afterwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL the questions.

1. Pleiotropy.
2. Genotype.
3. Karyotype.
4. Okasaki fragment.
5. Intron.
6. Nierenberg.
7. Alkaptonuria.

8. Diabetes mellitus.
9. Sperm banks.
10. Francis Galton.

PART B — ($5 \times 5 = 25$ marks)

Answer ALL the questions, choosing either (a) or (b).

11. (a) With suitable example, explain duplicate dominant genes.
Or
(b) Explain briefly about Mendel's work.
12. (a) Give the different kinds of crossing over.
Or
(b) Distinguish between genetic and chromosomes maps.
13. (a) Give a brief note on simple genes.
Or
(b) Write down the genetic dictionary.
14. (a) Write a short note on retrotransposons.
Or
(b) Write a brief note on DOPA.

15. (a) Give a brief account on Down's syndrome.

Or

- (b) Account on 18-trisomy and 21-monosomy.

PART C — ($5 \times 8 = 40$ marks)

Answer ALL the questions, choosing either (a) or (b).

16. (a) Describe the agglutination test's for A, B, AB and O human blood groups.
Or
(b) Give an account on Rh factor.
17. (a) Give an account on DNA replication.
Or
(b) Elaborate the molecular biology of Lac operon.
18. (a) Elucidate the molecular structure of genes.
Or
(b) Discuss the co-linearity of gene and protein.
19. (a) Explain the errors of nitrogenous waste metabolism.
Or
(b) Discuss elaborately the protein disorders.