

35125-NC

M.Sc. DEGREE EXAMINATION, NOVEMBER 2017.

THIRD SEMESTER

Genetics and Genomics

Non Core Paper — INHERITED DISEASES IN HUMANS

Time : Three hours

Maximum : 75 marks

(No additional sheet will be supplied)

PART A — (5 × 3 = 15 marks)

Answer any FIVE questions.

Each question carries 3 marks.

Each answer should not exceed 1 page.

1. Inversion.
2. Translocation.
3. Cri-du-chat syndrome.
4. Diabetes.
5. Programmed cell death.
6. Cell cycle.
7. Echocardiography.
8. Amniocentesis.

PART B — (4 × 15 = 60 marks)

Answer ALL questions.

Each question carries 15 marks.

Each answer should not exceed 6 pages.

9. Write a detail account on transposable elements in humans.

Or

10. Explain different types of chromosomal aberrations with examples.

11. What are monogenic disorders? Explain in detail about the genetic basis of cystic fibrosis and thalassemia.

Or

12. Explain in detail about :

- (a) Xerodermpigmentosum.
- (b) Alkaptonuria.
- (c) Coronary artery disease.

13. Explain various types of cancers and add a note on genetic basis of cancer.

Or

14. Define epigenetics. Explain in detail the epigenetic modifications for cancer.

15. What are mutations? How are mutations genetically tested?

Or

16. Explain the importance of genetic counseling in treating inherited diseases in humans.

