

This question paper contains 2 printed pages]

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S. No. of Question Paper : 5521

Unique Paper Code : 2152012401

Name of the Paper : (DSC) : Human Genetics

Name of the Course : B.Sc. (H) Part-II, Anthropology

Semester : IV

Duration : 3 Hours

Maximum Marks : 90

(Write your Roll No. on the top immediately on receipt of this question paper.)

Attempt any five questions.

All questions carry equal marks.

1. What are the different forms of DNA in humans ? Elucidate the characteristic features of double helical structure of DNA in humans.
2. Describe the various banding techniques used to assess chromosomal abnormalities in humans.
3. Differentiate between sex-linked dominant and sex-linked recessive pattern of inheritance. Explain with suitable examples and pedigrees.
4. Describe the history and applications of Human Genome Project.

P.T.O.

5. Explain various methods of DNA replication in humans with suitable diagrams.
6. What is dosage compensation and its importance in human genetics ?
7. Describe the process of translation in a human cell. Use suitable diagrams.
8. Explain various structural chromosomal abnormalities in humans with suitable examples.
9. Write short notes on any *two* of the following :
 - (a) Non-nuclear DNA inheritance
 - (b) *Cri-du-chat* syndrome
 - (c) Klinefelter's syndrome
 - (d) Genetic screening and prenatal diagnosis.