

[This question paper contains 2 printed pages.]

**Your Roll No.....**

**Sr. No. of Question Paper : 4051**

**H**

Unique Paper Code : 2152012401

Name of the Paper : Human Genetics (DSCC  
- 10)

Name of the Course : **B.Sc. Anthropology Part -  
II**

Semester : IV (NEP:UGCF-2022) May/  
June 2024

**Duration : 3 Hours**

**Maximum Marks: 90**

**Instructions for Candidates**

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt any **Five** questions.
3. **All** questions carry equal marks.
1. Describe the process of transcription in a human cell.
2. Explain various methods of DNA replication in humans with suitable diagrams.

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3. Describe the history and applications of Human Genome Project.
4. What are the characteristic features of double helical structure of DNA by Watson and Crick and alternate forms of DNA in humans?
5. Describe the various banding techniques used to assess chromosomal abnormalities in humans.
6. What do you understand by autosomal dominant and autosomal recessive inheritance pattern? Explain with suitable examples and pedigrees.
7. What is dosage compensation and its relevance in human genetics?
8. Explain various numerical chromosomal abnormalities in humans with suitable examples.
9. Write **short note** on **any two** of the following
  - a. FISH
  - b. *Cri-du-chat* syndrome
  - c. Genotyping and sequencing
  - d. Prenatal diagnosis and genetic screening

(100)