B.Sc. (Hons.) / III   A

ANTHROPOLOGY— Paper VI

(Human Genetics)

(Admissions of 2004 and onwards)

Time : 3 hours   *Maximum Marks* : 45

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

Attempt any five questions.
All questions carry equal marks.

1. Briefly discuss the chromosomes theory of heredity. 9

2. What is understood by numerical chromosomal abnormalities? Describe the etiology and characteristics of Down's syndrome. 9

3. Describe the importance and applications of Mendelian principles in human genetics. 9

4. Describe various forms of inheritance giving suitable examples. 9

5. Describe various types of chromosomal banding techniques. 9

6. Describe various methods of studying human heredity, and highlight their importance in human genetics. 9

7. Write a detailed note on genome diversity in India. 9

8. Following is sample data on flower colour in snapdragons:

Red Colour	Pink Colour	White Colour	n (Total)
62	131	57	250

Test the hypothesis that sample comes from a population having 1:2:1 ratio of red to pink to white colour. Critical value of chi-square at 5% level of significance with 2 d.f. is 5·991. 9

9. Write short notes on any *two* of the following:

(*a*) Edward's Syndrome

(*b*) Structural chromosal abnormalities

(*c*) Linkage

(*d*) Genomic imprinting. 9

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