

No. of Printed Pages : 3

**MANE-001**

**MASTER'S DEGREE IN  
ANTHROPOLOGY (MAAN)**

**Term-End Examination**

**December, 2025**

**MANE-001 : HUMAN GENETICS**

*Time : 3 Hours*

*Maximum Marks : 100*

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**Note :** *Attempt **five** questions in all, selecting at least **two** questions from each Section. All questions carry equal marks. The word limit for 20 marks question is **500** words and for 10 marks question it is **250** words.*

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**Section—A**

1. Discuss the history and various branches of Human Genetics. 20
2. Give a detailed account of double helical DNA structure. 20

3. Highlight the importance of mitotic cell division. Examine its various stages with suitable diagrams. 20
4. What are inborn errors of metabolism ? Briefly discuss any *two* of them in humans with suitable examples. 20
5. Write short notes on any *two* of the following : 10+10
  - (a) Inbreeding marriages
  - (b) Restriction enzymes
  - (c) Down syndrome
  - (d) RNA

### Section—B

6. Briefly discuss the Ethical, Legal and Social Issues (ELSI) in genetic research. 20
7. What is Bioinformatics ? Briefly discuss the tools used in it. 20
8. Give an account of Mendel's laws of inheritance in humans with suitable examples. 20
9. Discuss in brief the various applications of Human Genome Project. 20

10. Write short notes on any *two* of the following : 10+10

- (a) Fluorescence in-situ Hybridization (FISH)
- (b) Genetic Epidemiology
- (c) Abnormal Haemoglobin
- (d) Extra Nuclear Inheritance

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