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MANE-001

**MASTERS IN ANTHROPOLOGY
(MAAN)**

Term-End Examination

December, 2020

MANE-001 : HUMAN GENETICS

Time : 3 Hours

Maximum Marks : 100

***Note :** Answer any **five** questions. Attempt at least two questions from each Section. All questions carry equal marks. Word limit for **20** marks question is **500** words and for **10** marks question is **250** words.*

Section—A

1. What is Human Genetics ? Elucidate the importance of human genetics in physical anthropology. 20
2. Define Hardy-Wienberg law. Discuss its importance in human population genetics. 20

3. Briefly examine the Inborn Errors of metabolism in man with suitable examples. 20
4. Describe the structure of DNA and briefly comment on its salient features. 20
5. Write short notes on any *two* of the following :
2×10=20
 - (a) Down syndrome
 - (b) Meiotic cell division
 - (c) Inbreeding
 - (d) Cytogenetics

Section—B

6. Define DNA polymorphism. Briefly discuss various forms of DNA polymorphism. 20
7. What is Genetic Counselling ? Briefly describe the procedure involved in carrying out genetic counselling. 20
8. What is Bioinformatics ? Briefly discuss on any *three* tools of Bioinformatics. 20
9. Define Genetic epidemiology. Discuss the scope of genetic epidemiology in human genetic research. 20

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

2×10=20

- (a) Ethical, Legal and Social Issues (ELSI) in human genetics research
- (b) G6PD deficiency
- (c) Human Genome project
- (d) Prenatal diagnosis