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MANE-001

MASTER IN ANTHROPOLOGY (MAAN)
Term-End Examination
December, 2024

MANE-001 : HUMAN GENETICS

Time : 3 Hours

Maximum Marks : 100

Note : *There are two Sections, A and B. Answer **five** questions in all. Attempt 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.*

Section—A

1. Define Human Genetics. Examine the importance of human genetics in Physical Anthropology. 20
2. Define and discuss the importance of Hardy-Wienberg's law in human population genetics. 20

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3. What is mitotic cell division ? Briefly examine various stages of mitotic cell division with suitable diagrams. 20
4. Describe the structure and salient features of DNA. 20
5. Write short notes on any *two* of the following :
10+10
 - (a) Phenylketonuria
 - (b) Inbreeding
 - (c) Down syndrome
 - (d) Cytogenetics

Section—B

6. Briefly discuss various applications of Human Genome Project (HGP). 20
7. What is Genetic Counselling ? Briefly comment on its protocol. 20
8. Define and discuss the Ethical, Legal and Social Issues (ELSI) in genetic research. 20
9. Define Genetic Epidemiology. Examine its scope and importance in human genetic research. 20

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

10+10

- (a) Polymerase Chain Reaction (PCR)
- (b) Genetic Polymorphism
- (c) G6PD deficiency
- (d) Prenatal diagnosis

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