

MASTERS IN ANTHROPOLOGY (MAAN)**Term-End Examination****December, 2015****MANE-001 : HUMAN GENETICS***Time : 3 hours**Maximum Marks : 100*

Note : Answer any **five** questions. Choose at least **two** questions from each section. All questions carry equal marks. The word limit for 20 marks questions is 500 words and for 10 marks questions is 250 words.

SECTION A

1. Define Human Genetics. Briefly comment on different branches of Human Genetics. 20
2. What are the different types of cell division ? Discuss any one of the cell divisions, with suitable diagrams. 20
3. Discuss briefly Random mating and Assortative mating. 20

4. Describe the structure and salient features of DNA double helix. 20
5. Write short notes on any **two** of the following : 10+10=20
- (a) Down Syndrome
 - (b) ABO Blood Group System
 - (c) Y-linked Inheritance
 - (d) Inbreeding

SECTION B

6. What is DNA Polymorphism ? Briefly discuss the different forms of DNA polymorphism. 20
 7. Discuss in brief the various applications of Human Genome Project. 20
 8. What is Prenatal diagnosis ? Examine the different indications and techniques of prenatal diagnosis. 20
 9. What is Bioinformatics ? Briefly discuss any three tools used for Bioinformatics research. 20
 10. Write short notes on any *two* of the following : 10+10=20
 - (a) Epigenetics
 - (b) Polymerase Chain Reaction (PCR)
 - (c) Ethical, Legal and Social Issues (ELSI) in Genetic research
 - (d) Technique to detect colour blindness
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