

2023
M.Sc.
Third Semester
CORE – 09
ANTHROPOLOGY
Course Code: MANC 3.11
(Human Genetics & Variation)

Total Mark: 70
Time: 3 hours

Pass Mark: 28

Answer five questions, taking one from each unit.

UNIT-I

1. Critically examine the various historical views on racial classification. 14
2. Describe the factors responsible for causing genetic variations in human population. 14

UNIT-II

3. Discuss in detail the adaptive significance of human variation to high altitude environment. 14
4. Does skin colour have any adaptive significance? Explain. 14

UNIT-III

5. Write your own view to support the neutral theory of molecular evolution. 14
6. What is DNA polymorphism? Discuss on human evolution using Y chromosomal DNA haplogroups. 2+12=14

UNIT-IV

7. “Twins are important source for studying heredity”. Elaborate. 14
8. Discuss the principles of Lyon hypothesis. 14

UNIT-V

9. Describe the mating patterns and its genetic consequences in human population. 14
10. What is Hardy-Weinberg law? Cystic fibrosis is a recessive condition that affects 1 in 2500 babies in Caucasoid population of the United States. Calculate the following:
- (a) The frequency of the recessive alleles
 - (b) The frequency of the dominant alleles
 - (c) The percentage of heterozygous individuals in the population
- 2+4+4+4=14
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