2023

M.Sc.

Fourth Semester

CORE – 11

ANTHROPOLOGY

Course Code: MANC 4.11

(Human Population Genetics)

Total Mark: 70 *Pass Mark: 28*

Time: 3 hours

Answer five *questions, taking* one *from each unit.*

UNIT–I

1. Discuss on the status of population genetics in modern biology. 14
2. Write notes on the following: 7×2=14
   (a) Scope of population genetics
   (b) Basic concept of population genetics

UNIT–II

3. Discuss on the application of Hardy Weinberg law in human population genetics. 14

4. Cystic fibrosis is a recessive condition that affects about 1 in 2500 babies in the Caucasian population of the United States. Calculate the following:
   (a) Frequency of recessive allele in the population 5
   (b) Frequency of dominant allele in the population 5
   (c) Percentage of heterozygous individual (carriers) in the population 4

UNIT–III

5. Define balanced polymorphism. Explain how balanced polymorphism can be advantageous to some human population citing examples. 14

6. Explain on the long and short term effects of transient polymorphism. 14

UNIT–IV

7. Discuss on the concept of genetic drift in relation to human population genetics. 14

8. (a) Write a note on genetic isolates. 7
   (b) How does migration and gene flow affects a population? 7

UNIT–V

9. "Signs of inbreeding in human usually results in strange recessive diseases and birth defects." Illustrate with examples. 14

10. (a) Write a note on inbreeding co-efficient. 7
    (b) How does genetic counselling regulates in improving a healthy population? 7

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