



'সমানো মন্ত্র: সমিতি: সমানী'

UNIVERSITY OF NORTH BENGAL
B.Sc. Honours 5th Semester Examination, 2022

CC11-ANTHROPOLOGY (501)
HUMAN POPULATION GENETICS

Time Allotted: 2 Hours

Full Marks: 40

The figures in the margin indicate full marks.

SECTION-A

1. Answer any **five** questions from the following: 1×5 = 5
- (a) Define population genetics.
 - (b) Give an example of polygenic disease.
 - (c) Define genotype frequency.
 - (d) What do you mean by population?
 - (e) Who coined the term mutation?
 - (f) Write an exception of Hardy-Weinberg Principle.
 - (g) Define epistasis.
 - (h) What is cytoplasmic inheritance?

SECTION-B

2. Answer any **three** questions from the following: 5×3 = 15
- (a) What are the differences between bottleneck effect and founder effect?
 - (b) Write a short note on inbreeding.
 - (c) What are the Principles of Mendelian Genetics?
 - (d) Write a short note on Incomplete Penetrance.
 - (e) What do you mean by autosomal recessive mode of inheritance?

SECTION-C

3. Answer any **two** questions from the following: 10×2 = 20
- (a) Discuss in detail about various factors affecting the gene frequency in a population.
 - (b) Define Hardy-Weinberg law. Illustrate the Hardy-Weinberg principle with algebraic expression. 3+7
 - (c) What is single gene inheritance? Describe single gene inheritance with a suitable example.
 - (d) Discuss the role of genetic and environmental factor related to Quantitative Inheritance.

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