

2017

ANTHROPOLOGY

(Major)

Paper : 6.1

(Physical Anthropology)

Full Marks : 60

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

1. Choose the correct answer : $1 \times 7 = 7$

(a) What is the probability of a woman passing her X linked dominant trait to her children?

(i) 50% for male child

(ii) 50% for female child

(iii) 50% for each child

(iv) None of the above

- (b) A human biogeographic pattern that says that cold climate populations tend to have short arms and legs relative to their height is known as
- (i) Bergmann's rule
 - (ii) Thomson's rule
 - (iii) Allen's rule
 - (iv) Mendel's law
- (c) The nature-nurture study or the relative effect of environment and heredity on certain traits was initiated by
- (i) Mendel
 - (ii) Galton
 - (iii) Landsteiner
 - (iv) Hugo de Vries
- (d) The law that states that members of a pair of chromosomes will enter different gametes during meiosis is known as
- (i) law of segregation
 - (ii) law of independent assortment
 - (iii) Hardy-Weinberg law
 - (iv) law of dominance

- (e) Differential reproduction and survival of different genotypes is associated with
- (i) mutation
 - (ii) genetic drift
 - (iii) gene flow
 - (iv) natural selection
- (f) Velocity curve in growth studies represents
- (i) total growth
 - (ii) rate of growth
 - (iii) pre-natal growth
 - (iv) adolescent growth spurt
- (g) Except the sex determining chromosomes, the others exist as homologous pairs called
- (i) karyotype
 - (ii) autosome
 - (iii) gene loci
 - (iv) homozygotes

2. Give very short answers to the following questions (any four) : 2×4=8

- (a) Why is the study of genetics included in Anthropology?
- (b) What are sex limited traits?

- (c) Mention the methods of studying human growth.
- (d) What is single factor inheritance?
- (e) State Hardy-Weinberg law.
3. Give short answers to the following questions
(any three) : 5×3=15
- (a) Define population genetics.
- (b) Why is the pedigree method important in the study of human genetics?
- (c) Describe the mode of transmission of A, B, O blood group.
- (d) How does gene flow take place among populations?
4. Answer any three questions from the following : 10×3=30
- (a) State Mendel's law of inheritance. Describe the mode of inheritance of autosomal dominant and recessive traits with examples.
- (b) Discuss the interaction of heredity and environment on man with reference to stature and weight.

- (c) What is mutation? What are its different types? Describe how mutation can bring about human variation? $3+4+3=10$
- (d) Briefly trace the development of human genetics and discuss some of the recent developments.

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