

2009

( December )

## ANTHROPOLOGY

Course No. : ANT-C : 306

( Human Genetics )

Full Marks : 75

Time : 3 hours

The figures in the margin indicate full marks  
for the questions

Answer any **five** questions

1. Write about the chemical differences between DNA and RNA. Discuss the role of mRNA in protein synthesis. 7½+7½=15
2. Critically evaluate the neutral theory of human evolution. 15
3. Write about the evidences of Lyon's hypothesis. 15
4. What is multiple allelism? Describe the inheritance of the ABO blood group. 5+10=15

5. What is point mutation? Discuss how a point mutation within a given gene brings about a change in the genetic code.  $5+10=15$
6. What is probability? Distinguish between dependent and independent events of probability. Considering a recessive autosomal trait, what is the chance for the heterozygous parents to have a normal boy and an afflicted girl in any order?  $5+5+5=15$
7. What is sex-controlled trait? If 2% of all women in a population are bald, how many men are expected to be bald?  $15$
8. Write short notes on any two of the following :  $7\frac{1}{2}\times 2=15$
- Mendel's first law of inheritance
  - Erythroblastosis fetalis*
  - Watson-Crick model of DNA
  - Genetic drift

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