

(20518)

Roll No.

B. Sc. (Biotech.)-I Year

NS-3459

B. Sc. (Biotechnology) Examination, May 2018

Genetics

(B-105)

(New)

Time : Three Hours]

[Maximum Marks : 50

Note : Answer any *Five* questions. All questions carry equal marks.

1. Describe Mendel's laws of inheritance with the help of suitable examples. 10
2. Write an essay on ABO blood group inheritance in man. 10
3. Discuss the various syndromes known to be due to numerical changes in chromosomes in human beings. 10

(2)

Write an essay on mutation. 10

What is sex determination ? With suitable examples explain chromosome theory of sex determination. 5+5

6. (a) Describe coupling and repulsion hypothesis. 5
(b) Give the differences between complementary genes and supplementary genes. 5

Write short notes on the following : $2\frac{1}{2} \times 4$

- (a) Incomplete dominance
- (b) Factor hypothesis
- (c) Epistasis
- (d) Codominance.

- (a) What is Lyon's hypothesis ? 5
- (b) What is Karyotype ? 5

9. What are chromosomes ? Describe nucleosome model of chromosomes. 10

10. What is Karyotype ? How the study of karyotype helps in identification of various chromosomal anomalies in man ? 10

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