

B.SC. BIOTECHNOLOGY
SEMESTER- 3RD
GENETICS
BBT-302

Duration: 3 Hrs.

Marks: 70

Part : A (Objective) = 20

Part : B (Descriptive) = 50

[PART-B : Descriptive]

Duration: 2 Hrs. 40 Mins.

Marks: 50

[Answer question no. One (1) & any four (4) from the rest]

1. How is non-nuclear DNA inherited? Discuss the Correns' experiments for chloroplast inheritance with suitable diagram. 4 +6=10
2. Discuss the various types of structural aberrations observed in chromosome with suitable diagram. 10
3. What do you mean by sex determination? Explain genetic controlled sex determining mechanism in animals. 2+8=10
4. What is sex linked inheritance? What are the characteristics of sex –linked inheritance. Explain inheritance of X- Linked Recessive Gene in Human taking Haemophilia as an example. 2+5+3=10
5. Write short notes on *any two*: 5+5=10
 - a. Extragenic suppressors
 - b. Ames test
 - c. 5-BU and its mode of action
6. How genetic drift contributes to evolution? Explain it by giving suitable types and examples. 10
7. What is gene interaction? What are the types of gene interactions explain with examples. 1+9=10
8. Write short notes on 5 +5=10
 - a. Lethal genes
 - b. Laws of segregation

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