The University of Burdwan
B.Sc. Sem.-III (Hons.) Examinations 2020
Subject: Biotechnology
Paper: CC-5 (Genetics) (Theory)

Time: 2 Hrs. **Full Marks: 40**

Answer any *eight questions* from the following **5 x 8 = 40**

1. Briefly describe the role of allopopyploidy in the evolution of crop plants using suitable examples.

2. Critically illustrate the recessive epistatic gene interaction using suitable example.

3. Briefly illustrate the different types of inversion events using suitable diagrams.

4. Give an outline idea on the cytological basis of crossing over using suitable example and sketches.

5. Discuss the mechanism and impact of position effect on gene action with appropriate examples.

6. Enumerate the utility of multiple cross over events for the construction of genetic map.

7. Briefly discuss the occurrence of various types and consequences of chromosomal abnormality in human beings.

8. Discuss lethal gene action using suitable examples.

9. Briefly describe the different types of aneupolyploidy using suitable examplse and sketches.

10. Critically discuss the various screening procedures for isolation of mutants and some of the uses of mutants with appropriate examples.