

B.Sc. Part III (Hons.) Examination-2021

Subject: Botany (Hons.)

Paper: VIII

Time – 2 hrs

Full Marks –50

A. Answer any ten questions from the following: 5x10=50

1. Briefly explain complementary gene interaction with a suitable example. 5
2. Briefly explain an experiment to prove that DNA replication is semi-conservative in nature. 5
3. Distinguish between para-centric and peri-centric inversion. 5
4. Draw a labeled diagram of the ultrastructure of chloroplast. 5
5. Discuss the role of polyploidy in evolution of hexaploid wheat. 5
6. Briefly describe the structure of lac-operon. 5
7. Mention the important steps of micropopagation. 5
8. Schematically represent the 'Holliday Model' with suitable diagram. 5
9. Briefly discuss the regulation of cell cycle. 5
10. Mention the steps of isolation of protoplast. 5
11. Explain the genetic basis of heterosis. 5
12. Discuss the mutagenic effects of Base analogue and alkylating agents with example. 5