

12.a) Enlist and point out the theories of sex determination in plants.

(OR)

b) Describe the copy choice theory of crossing over.

13.a) Assess the various types of mutations you have studied.

(OR)

b) Describe the gene regulatory mechanisms in prokaryotes.

14.a) Mention the merits and demerits of clonal selection.

(OR)

b) Draw a schematic flow chart for Pureline selection method.

15.a) List the role of IBPGR

(OR)

b) Explain genetic basis of heterosis.

SECTION – C

(5 X 8 = 40 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.K4 & K5

16. a) Analyze the different stages of mitosis.

(OR)

b) Illustrate the structure and functions of nucleus with a suitable diagram.

17.a) What is gene interaction? Explain the complementary gene.

(OR)

b) Evaluate the Three point test cross.

18. a) “DNA as the genetic material” Discuss.

(OR)

b) Determine the spontaneous and induced mutation.

19.a) Examine the back cross breeding technique with a suitable example.

(OR)

b) Describe the mass selection method of crop improvement.

20.a) Explain the types and importance of Hybridization techniques.

(OR)

b) Summarize the germplasm conservation. in sugarcane.
