CLASS XII

REPRODUCTION IN FLOWERING PLANTS

1. Where is sporopollenin present in plants? State its significance with respect to its chemical Nature. 1

2. Normally one embryo develops in one seed but when an orange seed is squeezed many embryos of different shapes and sizes are seen. Mention how it has happened. 1

3. Name the part of the flower which the tassels of the corn-cob represent. 1

4. Name the type of flower which favours cross pollination. 1

5. Why is bagging of the emasculated flowers essential during hybridization experiments? 1

6. The meiocyteof rice has 24 chromosomes. How many chromosomes are present in its endosperm? 1

7. Why is a coconut plant referred to a monoecious? 1

8. A bilobed, dithecous anther has 100 microspore mother cells per microsporangium. How many male gametophytes this anther can produce? 1

9. Differentiate between albuminous and non-albuminous seeds, giving one example of each. 1

10. Why is geitonogamy also referred to as genetical autogamy? 1

11. The flower of brinjal is referred to as chasmogamous while that of beans is cleistogamous. How are they different from each other? 2

12. Banana is a parthernocarpic fruit whereas oranges show polyembryony. How are they different from each other with respect to seeds . 2

13. Draw a vertical section of a maize grain and label i) pericarp ii) scutellum c) coleoptile and iv) radicle. 2

14. Write the difference between the tender coconut water and the thick, white kernel of a mature coconut and their ploidy. 2

15 i) Write the characteristic features of anther, pollen and stigma of wind pollinated flowers.
ii) How do flowers reward their insect pollinators? Explain. 2

16 Draw a longitudinal section of post pollinated pistil showing entry of pollen tube into a matureembro-sac. Label filiform apparatus, chalazal end, hilum, antipodals, male gametes and secondary nucleus. 3

17 Make a list of any three outbreeding devices that flowering plants have developed and explain how they help to encourage cross-pollination. 3

18 Why are angiosperm anthers called dithecous ? Describe the structure of its Microsporangium.3

19 Draw a diagram of a male gametophyte of an angiosperm. Label any four parts. Briefly describe its structure. 5

20 How does the megaspore mother cell develops into 7-celled,8-nulceated embryosac in an angiosperm? Draw labeled diagram of a mature embryo sac. 5

21 a) Explain the different ways apomictic seeds can develop. Give an example of each.
(b) Mention one advantage of apomictic seeds to farmers.
(c) Draw a labelled mature stage of a dicotyledonous embryo. 5