CHAPTER-2

SEXUAL REPRODUCTION IN FLOWERING PLANT

WORKSHEET-1

Praadis Education
The Complete Learning App

Q.1 Write briefly the role of pollination in the growth and development in an angiosperm. **(C.B.S.E 2007)**

Q.2 Describe the structure of a typical/polygonum type embryo sac found in flowering plants. Why is it called monosporic? **(C.B.S.E 2007)**

Q.3 Why is the process of fertilization in a flowering plant referred to as double fertilization? **(C.B.S.E 2007)**

Q.4 What is the process of fertilization in flowering plant referred to as double fertilization ? **(C.B.S.E 2007)**

Q.5 The flower of Brinajal is referred to as chasmoganous while that of Bean is cleistogamous. How are they different from each other.

Q.6 Coconut Palm is monoecious while Date Palm is dioecious. Why are they called so ? **(C.B.S.E 2008)**

Q.7 Banana is a parthenocarpic fruit whereas oranges show polyembryony. How are they different from each other with respect to seeds? **(C.B.S.E 2009)**

Q.8 Name the cell from which the endosperm of Coconut develops. Give the characteristic features of endosperm of coconut. **(C.B.S.E 2009)**

Q.9 Draw a vertical section of a Maize grain and label.
(i) pericarp (ii) scutellum (iii) coleoptile (iv) radicle **(C.B.S.E 2009)**

Q.10 Fertilization is essential for production of seeds

(i) Give one example of an angiosperm that produces seed without fertilization. Name the process.

(ii) Explain two ways by which seeds develop without fertilization. **(C.B.S.E 2009)**

Q.11 Explain any two devices by which autogamy is prevented in flowering plants. **(C.B.S.E 2009)**

Q.12 Mention the reasons for difference in ploidy of zygote and primary endosperm nucleus in an angiosperm . **(C.B.S.E 2010)**

Q.13 How does the floral pattern of Mediterranean orchid, Ophrys, guarantee cross pollination ? **(C.B.S.E 2010)**

Q.14 Draw a longitudnal section of a post pollinated pistil to who entry of pollen tube into mature embryo sac. Label filiform apparatus, chalazal end, hilum, antipodals, male gametes and secondary nucleus. **(C.B.S.E 2010)**

Q.15 Where does triple fusion take place in a flowering plant. Why is it so called ? Mention its significance. **(C.B.S.E 2010)**

Q.16 If you squeeze a seed of orange, you might observe many embryos of different sizes. How is it possible ? Explain. **(C.B.S.E 2010)**

Q.17 (a) Mention any four strategies adopted by flowering plants to prevent self pollination.

(b) Why is geitonogamy also referred to geneticalautogamy ? **(C.B.S.E 2010)**

Q.18 Explain giving two reasons why pollen grains can be best measured as fossils. **(C.B.S.E 2010)**

Q.19 How many haploid cells are present in a mature female gametophyte of a flowering plant. Name them. **(C.B.S.E 2010)**

Q.20 Differentiate between albuminous and non-albuminous seeds, giving one example each. **(C.B.S.E 2010)**

Q.21 Draw a diagram of a male gametophyte of an angiosperm. Label any four parts . Why is sporollenin considered the most resistant organic material ? **(C.B.S.E 2011)**

Q.22 Differentiate between geitonogamy and xenogamy in plants. Which one between the two will lead to inbreeding depression and why ? **(C.B.S.E 2011)**

Q.23 Where is sporollenin present inplants ?state its significance with reference to its chemical nature. **(C.B.S.E. 2012)**

Q.24 State one advantage and one disadvantage of cleistogamy. **(C.B.S.E. 2012)**

Q.25 Explain the function each of 9a) Coleorhiza (b) Germ pores . **(C.B.S.E 2012)**

Q.26 How does the study of different parts of a flower help in identifying wind as its pollinating agent ? **(C.B.S.E 2012)**

Q.27 Write the cellular contents carried by the pollen tube. How does the pollen tube gain entry into the embryo sac ? **(C.B.S.E 2012)**

Q.28 Name the product of fertilization that forms the kernel of coconut. How does the Kernel differ from coconut water ? **(C.B.S.E. 2012)**

Q.29 (a) Mention the similarity between autogamy and geitonogamy.
(b) How does geitonogamy differ from xenogamy ? **(C.B.S.E 2012)**

Q.30 Differentiate perisperm and endosperm giving one example of each . **(C.B.S.E 2012)**

Q.31 How does pollen mother cell develop into a mature pollen grain ? Illustrate the stages with labelled diagrams. **(C.B.S.E 2009, 2010)**

Q.32 (a) Draw a labelled diagram of a mature embryo sac. **(C.B.S.E 2009, 2010)**
(b) Why does a pollen grain possess two male gametes ? **(C.B.S.E 2009)**

Q.33 (a) Trace the development of embryo after synagmy in a dicot plant.
(b) Endosperm development precedes embryo development. Explain.
(c) Draw a diagram of a mature dicot embryo and label cotyledons, plumule, radicle, hypocotyl in it. **(C.B.S.E 2009)**

Q.34 Describe in sequence the events that lead to the development of a 3-celled pollen grain from microspore mother cell in angiosperms. **(C.B.S.E.2010)**

Q.35 (a) Draw a labelledlongisectional view of an alubumniousseed ? **(C.B.S.E 2010)**
(b) How are seeds advantageous to flowering plants ?

Q.36 Explain double fertilization and trace the post fertilization events in sequential order leading to seed formation in a typical dicotyledonous plant. **(C.B.S.E 2010)**

Q.37 Give reasons why

(i) Most zygotes in angiosperms divide only after certain amount of endosperm is formed.

(ii) Groundnut seeds are exalbuminous and Caster seeds are albuminous.

(iii) Micropyle remains as a small pore in the seed coat of a seed.

(iv) Integuments of an ovule harden and the water content is highly reduced as the seed matures.

(v) Apple and Cashew are not called true fruits. **(C.B.S.E. 2011)**

Q.38 (a) Draw a labelled diagram of L.S. on an embryo of grass (any six labels).
(b) Give reasons for each of the following **(C.B.S.E. 2011)**

Q.39 (a) Draw a diagram of an enlarged view of T.S. one microsporangium of an angiosperm and label the following parts :
(i) Tapetum (ii) Middle layer
(iii) Endothecium (iv) Microspore mother cells

(b) Mention the characteristic features and functions of tapetum.
(c) Explain the following giving reasons :
(i) Pollen grains are well preserved as fossils
(ii) Pollen tablets are in use by people these days. **(C.B.S.E. 2011)**

Q.40 (a) Why is the process of fertilization in angiosperms termed as double fertilization. Explain.
(b) Draw a diagram of an angiospermic embryo sac where fertilization is just completed. Label the following (i) Micropylar and of embryo sac (ii) Part that develops into an embryo (iii) Part that develops into an endosperm (iv) The degenerating cells at chalazal end.
(c) Draw a labelled diagram of globular embryonic stage of an angiosperm. **(C.B.S.E. 2011)**

Q.41 (a) Explain the characteristic features of wind pollinated flowers. How are insect pollinated followers different from them ?
(b) Explain the mutually rewarding relationship between Yucca plant and species of moth. **(C.B.S.E. 2011)**

Q.41 How does the megaspore mother cell develop into 7-celled, 8 –nucleate embryo sac in an angiosperm ?
Draw labelled diagram of a mature embryo sac. **(C.B.S.E. 2012)**

Q.42 (a) Why is fertilization in an angiosperm referred to as double fertilization ? Mention the policy of the cells involved.
(b) Draw a neat labelled sketch of L.S. of an endospermous monocot seed. **(C.B.S.E. 2012)**

Q.43 (a) How does microspore mother cell develop into mature pollen grain in angiosperms ?
(b) Describe the structure of a mature pollen grain and draw a labelled diagram of its two celled stage. **(C.B.S.E. 2012)**

44.Why are beehives kept in a crop field during flowering period? Name any two crop fields where this is practised. **(C.B.S.E. 2014)**

45.Explain any three advantages that seeds offer to angiosperms.
(C.B.S.E. 2014)

45.(a) Why does endosperm development precede embryo development in angiosperm seeds? State the role of endosperm in mature albuminous seeds.
(b) Describe with the help of three labelled diagrams the different embryonic stages that include mature embryo of dicot plants **(C.B.S.E. 2014)**