

BIOLOGY CLASS 12
SUMMER VACATION HOMEWORK

K.V.BACHELI
CLASS: XII
SUBJECT: BIOLOGY

1. Complete the writing part of practical note book.
2. Do the NCERT exercise of fourth lesson principles of inheritance and variations.
3. In some species of Asteraceae and grasses, seeds are formed without fusion of gametes. Give the scientific term for such type of reproduction.
4. How are pollens stored in a pollen bank?
5. Draw L.S of anatropous ovule of an angiosperm and label its parts.
6. Continued self-pollination lead to inbreeding depression. List three devices, which flowering plant have developed to discourage self-pollination.
7. Outer envelope of pollen grain made of a highly resistant substance. What is the substance? At which particular point the substance is not present?
8. Fruits generally develop from ovary, but in few species thalamus contributes to fruit formation. (a) Name the two categories of fruits. (b) Give one example of each.
9. List any four characteristic features of insect pollinating flower?
10. List any four characteristic features of wind pollinating flower?
11. List any four characteristic features of water pollinating flower? Which type of pollination is seen in water lily and water Hyacinth?
12. Differentiate between chasmogamous and cleistogamous flower. Give one example of each.

13. Differentiate between Autogamy, Geitonogamy and Xenogamy.
14. Differentiate between microsporogenesis and megasporogenesis. What type of cell division occurs during these events? Name the structure formed at the end of these two events.
15. Draw the embryo sac of a flowering plant and label: (a) Central cell, Chalazal end, Synergids. (b) Name the cell that develops into embryo sac (c) Mention the role of various cells of embryo sac. (d) Give the role of filiform apparatus.
16. Define the term: Parthenogenesis, parthenocarpy, apomixis, and polyembryony.
17. Explain the term emasculation and bagging.
18. What do you mean by double fertilisation?
19. Draw diagram of mature embryo sac.
20. Draw diagram of T.S of mature anther and microsporangium.
21. Draw diagram of mature pollen grain.
22. Draw diagram of L.S of monocot seed.
23. Draw diagram of L.S of monocot embryo.
24. Draw diagram of L.S of dicot embryo.
25. Where fertilisation does takes place in human being? Explain the process.
26. Which cells of embryo has potency to give rise to all tissues and organs? What are these cells known as?
27. Write two major functions of ovary.
28. Which hormone is involved in induction of parturition? Explain the mechanism of parturition?
29. What is colostrum? Why is it essential for new born?
30. Why testes are situated outside the abdominal cavity within a pouch called scrotum?
31. Identify major differences between spermatogenesis and Oogenesis.
32. Draw a labelled diagram of structure of spermand explain role of each part.

33. What is seminal plasma? Which sugar is present in seminal plasma?
34. Write the name and role of hormones involved in milk production? What is the function of cells of alveoli with respect to mammary gland?
35. Which structure in an ovary is characterised by a fluid filled cavity called antrum?
36. Name the tissues which secrete oestrogens and progesterone for maintenance of pregnancy.
37. Mention two functions of FSH during the follicular phase of menstrual cycle.
38. Mention the accessory glands of male reproductive system. Give a term to the secretions of these glands collectively.
39. How do enzymes in the acrosome help in fertilisation?
40. Draw a neat and labelled diagram of blastocyst. Where are stem cells found in blastocyst?
41. Which hormones are released only during pregnancy? Mention one function of each.
42. What are the different phases of Menstruation cycle? List and explain it in short.
43. Draw flow chart to show spermatogenesis and Gametogenesis.
44. What is meant by L.H Surge? Write about its significance.
45. State and explain the Laws of inheritance given by Mendel.
46. Explain the deviations from Mendelism with examples (Incomplete dominance, Codominance and multiple allelism)
47. Explain linkage and Recombination with respect to chromosomal theory of inheritance?
48. Explain polygenic inheritance and pleiotropy with examples.
49. Explain sex determination in human, birds and honey bee.
50. Explain the Mendelian and chromosomal disorders with reference to their cause and symptoms.

HAPPY LEARNING