

## Holiday Homework / XII / Biology / 2021-22

**Note :** Learn & Revise Chapter 1 & 2 and answer the following questions in your Biology notebook.

- 1 Which individuals can be termed as clones?
- 2 How do the following organisms reproduce: a) *Paramoecium* b) *Penicillium*?
- 3 Which part of banana and ginger plants are used for vegetative propagation?
- 4 In *Bryophyllum*, leaf margins show green structures. What are these? Name another plant having such structure.
- 5 What is the vital link between two generations?
- 6 Give term for the condition in which a single organism possesses both sex organs.
- 7 Why do hilly areas of Kerala, Karnataka and Tamil Nadu transform into blue Stretches that attracts many tourists?
- 8 Define 'oestrus' and 'menstrual' cycles.
- 9 Differentiate between homogamete and heterogametes.
- 10 What regulates the reproduction processes and the associated behavioural expressions in organisms?
- 11 Give any three differences between asexual and sexual reproduction.
- 12 Enlist the changes that occur post- fertilization in plants.
- 13 What is agamospermy?
- 14 Can snails pollinate the flowers? What do you call such a pollination?
- 15 In some species of Asteraceae and grasses, seeds are formed without fusion of gametes. Give the scientific term for such type of reproduction.
- 16 How are pollen stored in a pollen bank?
- 17 Hypanthodium is a special type of inflorescence. Then what is hypanthium?
- 18 In the embryos of a typical dicot and a grass, which are the true homologous structures?
- 19 State two differences between Perisperm and Pericarp

Draw I.s of anatropous ovule of an angiosperm and label a) Nucellus b) Secondary nucleus.

20 Identify the type of placentations and define them

21 a) Draw a labeled sectional view of albuminous seed.

b) Give two advantages of seeds to flowering plants

22 Continued self pollination lead to inbreeding depression.



List three devices, which flowering plant have developed to discourage self pollination?

24. The diagram represents the stages of dicot embryo development.

(a) Label A, B and C. b) Which type of cell division takes place in embryogenesis?

(c) Endosperm development precedes embryo development. Justify.

25. **Assertion:** Zygote is the only cell that gives a vital link between two generations of an organism.

**Reason:** The two gametes fuse to form a single zygote.

26. **Assertion:** Viviparous animals give better protection to their offspring.

**Reason:** They lay their eggs in safer places in the environment.

27. **Assertion:** An ovule is transformed into a fruit after fertilization.

**Reason:** The fruits are formed only from ovules.

28. **Assertion:** In angiosperms, the ovule develops into a seed after fertilization.

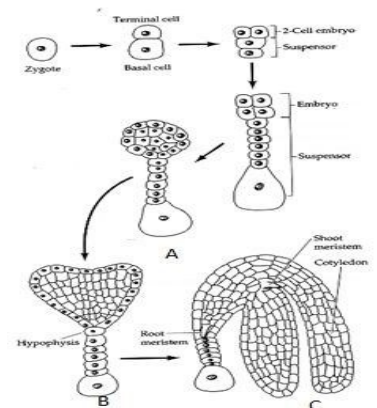
**Reason:** Fertilization is not essential for the development of fruit.

29. **Assertion:** A plant biotype can be retained and multiplied indefinitely without any change or variation by the method of asexual reproduction.

**Reason:** Asexual reproduction does not involve meiosis and syngamy.

30. **Assertion:** Red colour of flowers attracts butterflies and wasps, but not bees.

**Reason:** Bees are colour-blind to red.



31. **Assertion:** Cross pollination results in healthy and stronger offspring.  
**Reason:** Due to phenomenon of hybrid vigour.
32. **Assertion:** The endosperm of angiosperms is generally triploid ( $3n$ ).  
**Reason:** It develops from primary endosperm nucleus formed by fusion of haploid male gametes and diploid secondary nucleus.
33. **Assertion:** Insects visit flowers to gather honey.  
**Reason:** Attraction of flowers prevents the insects from damaging other parts of the plant.
34. **Assertion:** Self-pollination occurs in Pteridophytes and monocots.  
**Reason:** Cross-pollination occurs in gymnosperms and dicots