

PRACTICE QUESTIONS
FOR
SELF EVALUATION
FROM
CHAPTER - I & II

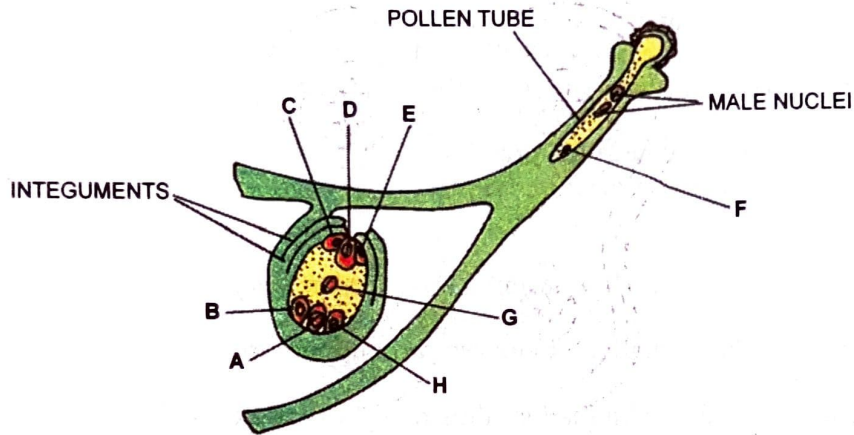
1. Which type of binary fission is found in *Paramecium*?
2. Name two types of organisms in which multiple fission occurs.
3. Which type of asexual reproduction is found in *Spongilla*?
4. Name two animals which can regenerate their lost parts.
5. Why are human beings called unisexual organisms?
6. Name two hermaphroditic animals.
7. Name secondary sex organs of human female.
8. State one difference between oviparous and viviparous animals.
9. State one difference between internal and external fertilization.
10. What is protogynous condition? Give one example.
11. Define protandry. Give one example.
12. What is menstrual cycle?
13. What is asexual method of reproduction in *Rhizopus*?
14. How *Penicillium* reproduces asexually?
15. Name two plants, which are propagated by artificial methods of vegetative propagation.
16. In which type of reproduction (i) Gametes are involved; (ii) Gametes are not involved.
17. Name the various methods of vegetative propagation.
18. Name the male part of a flower.
19. Name the female part of a flower.
20. Where the pollen grains are produced?
21. Which part in ovule represents the female gametophyte?
22. How many male gametes are formed in pollen tube of angiosperms?
23. What name is given to (i) Sepals of a flower, (ii) Petals of a flower.
24. Why reproduction is essential?
25. Name different types of asexual reproduction.
26. Name two basic processes involved in sexual reproduction.
27. Name the three phases of gametogenesis.
28. Give the term for change of a spermatid into sperm.
29. Who is called father of 'Modern Embryology'?
30. Give another term for fertilization.
31. Name two periods of development.
32. What is conjugation?
33. What is sexual dimorphism?

1. *Amoeba* is called immortal.
2. Middle piece is called power house of the sperm.
3. Primary sex organs of the body control the growth, maintenance and functions of secondary sex organs.
4. Spermatids possess a haploid chromosome number.
5. Asexual reproduction does not produce the genetic variability.
6. Both gametogenesis and fertilization collectively maintain the chromosome number constant from generation to generation.
7. Unfertilized ovum generally fails to develop into adult organism.
8. Air layering is done in plants like litchi, guava, etc.

Time Allowed : 1:30 Hours

1. What is incompatibility? (1)
2. What is cellular type of endosperm? (1)
3. Define cross pollination (1)
4. What is apocarpous condition in a flower? (1)
5. What happens during microsporogenesis? (1)
6. Discuss autogamy with examples. (2)
7. Write any four characters of anemophilous flowers. (2)
8. What will happen, if fertilization fails in angiosperm? (2)
9. Define: (i) Viability (ii) Vivipary. (2)
10. Mention two strategies evolved by flowers to prevent self pollination. (2)
11. Parthenocarpy and apomixis are different phenomena. Discuss the benefits. (3)
12. Describe the development of embryo sac. (3)
13. Discuss double fertilization in angiosperms. (3)
14. What is the importance of megaspore mother cell undergoing meiosis? (3)
15. What is flower? Differentiate its essential and non-essential floral organs. (3)
16. What do you understand by development of embryo in angiosperms? Support your answer with suitable diagrams. (5)

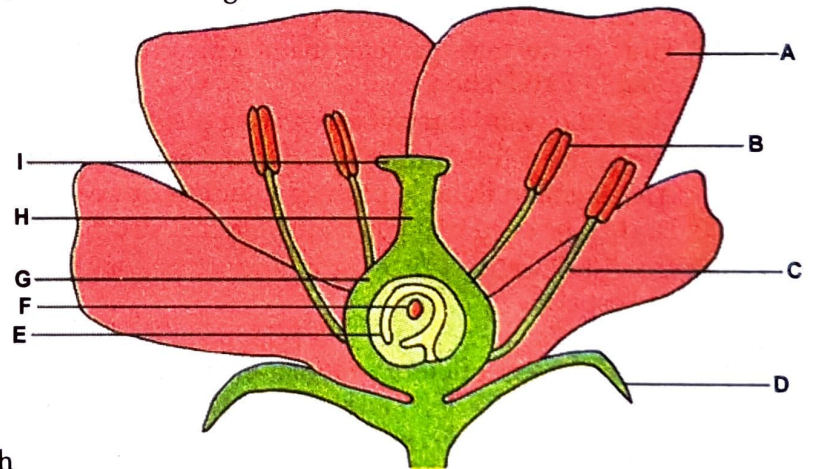
The diagram below shows a germinating pollen grain and a mature ovule from an insect-pollinated flower. Some parts have been labelled.



Give the letter of the nucleus which fuses with a male nucleus to form each of the following :

- (i) The zygote (ii) The endosperm

The diagram represents a flower. Label the parts and answer the following :



(a) Give the letter of the structure which :

- (i) becomes the fruit wall; (ii) becomes the testa (seed coat); (iii) produces pollen grains.

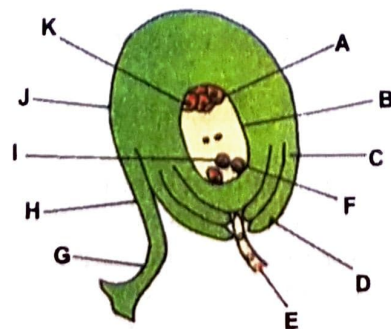
(b) Explain two ways, shown in the diagram, in which this flower is adapted for insect pollination.

1. Why do you think the exine of pollen grain should be hard? What is the function of germ pore?

2. What is the importance of megaspore mother cell undergoing meiosis?

3. With the help of labelled diagrams, depict the stages of microspore maturing into a pollen grain.

4. Look at figure and label the following :



5. Draw a well labelled diagram of anatropous ovule.

6. Define the following terms :

- (a) Porogamy (b) Anemophily (c) Mesogamy

Trace the development of female gametophyte in a flowering plant. Draw a labelled diagram of the L.S. of an ovule showing the gametophyte.

(a) Draw a labelled diagram of L.S. of an embryo of grass (any six labels).

(b) Give reason for each of the following :

(i) Anthers of angiosperm flowers are described as dithecous.

(ii) Hybrid seeds have to be produced year after year.

(a) Draw a L.S. of a pistil showing pollen tube entering the embryo sac in an angiosperm and label any six parts other than stigma, style and ovary.

(b) Write the changes a fertilized ovule undergoes within the ovary in an angiospermic plant.

1. Which is the most critical event of sexual reproduction? (1)
2. Why meiosis takes place during sexual reproduction? (1)
3. In which mode of reproduction new variants are produced? (1)
4. What is the uniqueness in the flowering and fruiting of bamboo species? (1)
5. Name any two hermaphrodite animals. (1)
6. What is a zoospore? (2)
7. Write the genetic constitution of :
(a) Ovary (b) Male gamete (c) Egg (d) Zygote (2)
8. What are viviparous animals? (2)
9. Although potato tuber is an underground part, it is considered as stem, why? (2)
10. Why is the offspring formed by asexual reproduction referred as clone? (2)
11. Is it possible to consider vegetative propagation observed in certain plants like *Bryophyllum*, water hyacinth, ginger etc. as a type of asexual reproduction. Give three reasons. (3)
12. Explain the process of budding with suitable diagram. (3)
13. Is the presence of large number of chromosomes in an organism, a hindrance to sexual reproduction. Discuss. (3)
14. Offsprings formed due to sexual reproduction have better chances of survival. Why? (3)
15. A multicellular filamentous alga shows sexual reproduction where meiosis occurs after the formation of zygote. State the ploidy of gametophyte and gametangia. (3)
16. Discuss the various methods of asexual reproduction in plants. (5)