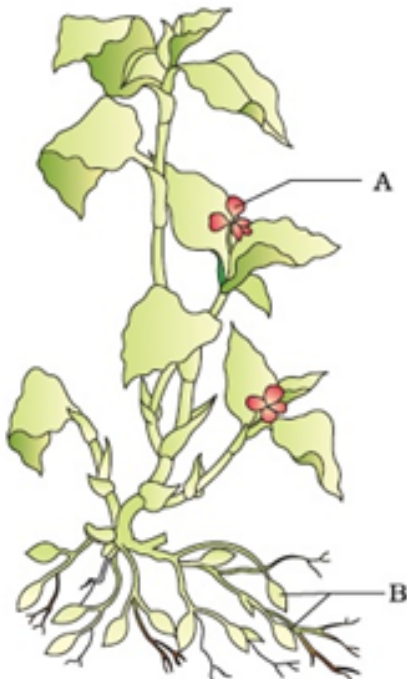


Reproduction in Organism

Very Short Answer Type Questions

1. Mention two inherent characteristics of Amoeba and yeast that enable them to reproduce asexually.
2. Why do we refer to offspring formed by asexual method of reproduction as clones?
3. Although potato tuber is an underground part, it is considered as a stem. Give two reasons.
4. Between an annual and a perennial plant, which one has a shorter juvenile phase? Give one reason.
5. Rearrange the following events of sexual reproduction in the sequence in which they occur in a flowering plant: embryogenesis, fertilisation, gametogenesis, pollination.
6. The probability of fruit set in a self-pollinated bisexual flower of a plant is far greater than a dioecious plant. Explain.
7. Is the presence of large number of chromosomes in an organism a hindrance to sexual reproduction? Justify your answer by giving suitable reasons.
8. Is there a relationship between the size of an organism and its life span? Give two examples in support of your answer.
9. In the figure given below the plant bears two different types of flowers marked 'A' and 'B'. Identify the types of flowers and state the type of pollination that will occur in them.



10. Give reasons as to why cell division cannot be a type of reproduction in multicellular organisms.
11. In the figure given below, mark the ovule and pericarp





12. Why do gametes produced in large numbers in organisms exhibit external fertilisation?

13. Which of the followings are monoecious and dioecious organisms.

- a. Earthworm
- b. Chara
- c. Marchantia
- d. Cockroach

14. Match the organisms given in Column-‘A’ with the vegetative propagules given in column ‘B’.

Col. A	Col. B
i. Bryophyllum	a. offset
ii. Agave	b. eyes
iii. Potato	c. leaf buds
iv. Water hyacinth	d. bulbils

15. What do the following parts of a flower develop into after fertilisation?

- a. Ovary
- b. Ovules

Short Answer Type Questions

1. In haploid organisms that undergo sexual reproduction, name the stage in the life cycle when meiosis occurs. Give reasons for your answer.
2. The number of taxa exhibiting asexual reproduction is drastically reduced in higher plants (angiosperms) and higher animals (vertebrates) as compared with lower groups of plants and animals. Analyse the possible reasons for this situation.
3. Honeybees produce their young ones only by sexual reproduction.
In spite of this, in a colony of bees we find both haploid and diploid individuals. Name the haploid and diploid individuals in the colony and analyse the reasons behind their formation.
4. With which type of reproduction do we associate the reduction division? Analyse the

reasons for it.

5. Is it possible to consider vegetative propagation observed in certain plants like Bryophyllum, water hyacinth, ginger etc., as a type of asexual reproduction? Give two/three reasons.
6. 'Fertilisation is not an obligatory event for fruit production in certain plants'. Explain the statement.
7. In a developing embryo, analyse the consequences if cell divisions are not followed by cell differentiation.
8. List the changes observed in an angiosperm flower subsequent to pollination and fertilisation.
9. Suggest a possible explanation why the seeds in a pea pod are arranged in a row, whereas those in tomato are scattered in the juicy pulp.
10. Draw the sketches of a zoospore and a conidium. Mention two dissimilarities between them and at least one feature common to both structures.
11. Justify the statement 'Vegetative reproduction is also a type of asexual reproduction'.

Long Answer Type Questions

1. Enumerate the differences between asexual and sexual reproduction.
Describe the types of asexual reproduction exhibited by unicellular organisms.
2. Do all the gametes formed from a parent organism have the same genetic composition (identical DNA copies of the parental genome)? Analyse the situation with the background of gametogenesis and provide or give suitable explanation.
3. Although sexual reproduction is a long drawn, energy-intensive complex form of reproduction, many groups of organisms in Kingdom Animalia and Plantae prefer this mode of reproduction. Give at least three reasons for this.
4. Differentiate between (a) oestrus and menstrual cycles; (b) ovipary and vivipary. Cite an example for each type.
5. Rose plants produce large, attractive bisexual flowers but they seldom produce fruits. On the other hand a tomato plant produces plenty of fruits though they have small flowers. Analyse the reasons for failure of fruit formation in rose.
Both these plants – rose and tomato – both selected by human beings for different characteristics, the rose for its flower and tomato for its fruit. Roses, being vegetatively propagated do not need to produce seeds.