



ASSIGNMENT NO. 3

SUBJECT: BIOLOGY

CLASS-IX

OCTOBER '2026

Chapter :11 Reproduction: How Life Continues

Short Answer Questions

1. Define vegetative propagation. Give two examples of plants that reproduce this way.
2. Differentiate between self-pollination and cross-pollination (any two points).
3. Why are the testes present in a pouch outside the body? Name this pouch.
4. What is meiosis? Why is it essential in sexual reproduction?
5. Why do animals with external fertilisation, such as fish and frogs, produce thousands of eggs while birds produce very few?
6. Name any two sexually transmitted infections (STIs) and state one way to prevent their spread.

Activity-Based Questions

7. Activity 11.2 (Yeast). A pinch of yeast is added to sugar solution, kept warm for 1–2 hours, and a drop is observed under a microscope.
 - (a) Why is the test tube kept in a warm place?
 - (b) What small round outgrowths are seen on the parent cells?
 - (c) What do these observations tell you about reproduction in yeast?
8. Activity 11.3 (Bread mould). A moist slice of bread is kept in a warm, dark chamber for three days, and mould grows on it.
 - (a) Where did the mould come from, since the bread was fresh at the start?
 - (b) Name the thread-like structures and the round structures at their tips seen under the microscope.
 - (c) Why do we refrigerate food to prevent spoilage?
9. Activity 11.4 (Beads). Three pairs of beads (green, blue, red) represent three pairs of contrasting characters on three chromosomes. One bead is picked from each pair to make a combination.
 - (a) How many different combinations are possible?
 - (b) What process in the body does the picking of one bead from each pair represent?
 - (c) How does this explain why children differ from their parents and siblings?

Case-Based Questions

10. The Apple Orchards. In the lower Himalayan region, apple yield has been falling because of climate change and fewer natural pollinators. Researchers set up two orchards. At Place A, flowers were left to natural pollinators. At Place B, beekeeping was added to the orchard. Approximate results: Place A had about 26% fruit set and 35% fruit drop. Place B had about 40% fruit set and 8% fruit drop.
- (a) Name the process in which bees help the apple flower form fruit.
 - (b) Which orchard gave the higher yield? Give a reason from the data.
 - (c) State one hypothesis the researchers may have tested.
 - (d) Suggest one benefit to the farmer of keeping bees apart from better apple yield.
11. The Banana Farmer. A farmer wants to grow a large number of healthy, virus-free banana plants with identical desirable qualities. A Krishi Vigyan Kendra (KVK) advises him to use plantlets produced from the shoot tip of a selected plant in a laboratory. He also wants a rose plant that gives yellow and pink roses on the same plant.
- (a) Name the technique used to produce banana plantlets from the shoot tip.
 - (b) Why are plants produced this way genetically identical to the parent?
 - (c) Which technique can be used to get yellow and pink roses on one plant?
 - (d) Why can this method give healthier plants than seeds when the parent plant has a virus infection?

Long Answer Questions

12. Describe the sexual reproduction of a flowering plant, from pollination to the formation of fruit and seed. Mention the role of the pollen tube and the zygote.

OR

Explain the different pollination strategies in plants (wind, water, insects and birds). Give one example of each and say how the flower or pollen is adapted.

13. Explain three methods of vegetative propagation (cutting, grafting and layering) with the steps involved. State two advantages of such methods in agriculture.
14. What happens in the human female reproductive system during a typical 28-day menstrual cycle? Explain the events of menstruation, rebuilding of the uterine lining, ovulation and the changes if the egg is fertilised or not fertilised.

Diagram-Based Questions

15. Draw a neat, labelled longitudinal section of a flower. Label at least six parts from: sepal, petal, anther, filament, stigma, style, ovary and ovule

16. (a) Name the parts labelled A, B, C, D and E in the diagram of the female reproductive system.

(b) Where do the following functions occur?

(i) Production of an egg

(ii) Fertilisation

(iii) Implantation of zygote

(c) What happens to the lining of the uterus:

(i) before release of a fertilised egg?

(ii) if no fertilisation occurs?

Diagram: female reproductive system

