CLASS 10 BIOLOGY

# HOW DO ORGANISMS REPRODUCE?

Most Important Board Examination Questions

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| CBSE & ICSE | Practice Worksheet | 1, 2, 3 & 5 Marks |

These questions are designed for revision and written practice. Read each question carefully and answer using correct biological terminology.

## A. Very Short Answer Questions (1 Mark)

1. Define reproduction.
2. What is binary fission?
3. Name the organism that reproduces by multiple fission.
4. What is vegetative propagation?
5. Name the male reproductive part of a flower.
6. What is pollination?
7. Define fertilisation.
8. What is a zygote?
9. Where are sperms produced in humans?
10. Which hormone is responsible for the development of male secondary sexual characters?
11. What is ovulation?
12. Where does fertilisation normally occur in humans?
13. What is implantation?
14. Name the hormone secreted by the corpus luteum.
15. What is the function of the placenta?

## B. Short Answer Questions (2 Marks)

1. Why is DNA copying important in reproduction?
2. Give two advantages of sexual reproduction over asexual reproduction.
3. Differentiate between binary fission and multiple fission.
4. Explain the process of budding in Hydra.
5. Why is vegetative propagation preferred for growing some plants?
6. Differentiate between pollination and fertilisation.
7. State two functions of the testes.
8. Why are testes located outside the abdominal cavity?
9. What is the significance of the menstrual cycle?
10. Mention two functions of the placenta.

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## C. Short Answer Questions (3 Marks)

1. Explain the different methods of asexual reproduction with suitable examples.
2. Describe the process of spore formation in Rhizopus.
3. Explain the structure and functions of the male reproductive system.
4. Describe the female reproductive system and its functions.
5. Differentiate between self-pollination and cross-pollination.
6. Explain the changes that occur in a flower after fertilisation.
7. Describe the structure of a human sperm with a labelled diagram.
8. Explain the importance of reproductive health.
9. Describe the menstrual cycle in brief.
10. Explain the role of hormones in human reproduction.

## D. Long Answer Questions (5 Marks)

1. Explain sexual reproduction in flowering plants with a neat, labelled diagram.
2. Describe the human male reproductive system with a labelled diagram and explain the functions of each part.
3. Describe the human female reproductive system with a labelled diagram and explain the functions of each part.
4. Explain fertilisation and the development of the embryo in humans.
5. Describe the different methods of contraception. Explain their importance.
6. Explain the different methods of asexual reproduction with examples and diagrams.

## E. Assertion and Reason Questions

Choose the correct option:

A. Both Assertion and Reason are true, and Reason correctly explains Assertion.

B. Both Assertion and Reason are true, but Reason does not correctly explain Assertion.

C. Assertion is true, but Reason is false.

D. Assertion is false, but Reason is true.

1. Assertion: Sexual reproduction produces variations in offspring.
   Reason: Sexual reproduction involves the combination of genetic material from two parents.
2. Assertion: Testes are located outside the abdominal cavity.
   Reason: Sperm formation requires a temperature slightly lower than normal body temperature.
3. Assertion: The ovary develops into a fruit after fertilisation.
   Reason: The ovule develops into a seed.
4. Assertion: Cross-pollination generally produces greater genetic variation than self-pollination.
   Reason: Cross-pollination involves the transfer of pollen between different plants of the same species.
5. Assertion: Menstruation occurs when fertilisation does not take place.
   Reason: The uterine lining breaks down due to a decline in ovarian hormone levels.

Answer key: 1-A, 2-A, 3-B, 4-A, 5-A.

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## F. Competency-Based / Case Study Questions

### Case Study 1: Reproduction in Plants

A student observes a flower and identifies the anther and stigma. She transfers pollen grains from one flower to another flower of the same species on a different plant. Later, a pollen tube develops and reaches the ovule.

1. Name the process of transferring pollen grains.
2. Which type of pollination has occurred?
3. What is the function of the pollen tube?
4. What is formed after the fusion of male and female gametes?
5. Name the process in which two male gametes participate in two separate fusion events.

### Case Study 2: Human Reproduction

A couple is planning a family and wants to understand the process of fertilisation. They learn that fertilisation normally takes place in the oviduct and that the developing embryo later attaches to the uterus.

1. Where does fertilisation normally occur?
2. What is the first cell formed after fertilisation called?
3. What is implantation?
4. Name the organ that provides nutrients and oxygen to the developing foetus.
5. What is the function of the umbilical cord?

### Case Study 3: Asexual Reproduction

A biology teacher places a piece of bread in a moist environment. After a few days, cotton-like fungal growth appears. On closer observation, tiny spores are seen inside round structures.

1. Identify the organism.
2. Name the reproductive structure.
3. Where are spores produced?
4. Why do spores have thick protective walls?
5. State one advantage of spore formation.

> Study Tip
> Practise labelled diagrams, write answers in points, and revise key biological terms before the examination.

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