

PRACTICE PAPER 01 (2026-27)
CHAPTER 07: HOW DO ORGANISMS REPRODUCE?

SUBJECT: SCIENCE

MAX. MARKS : 40

CLASS : X

DURATION : 1½ hrs

General Instructions:

- (i) All questions are compulsory.
- (ii) This question paper contains **20** questions divided into five Sections A, B, C, D and E.
- (iii) **Section A** comprises 10 MCQs and Assertion-Reason questions of **1 mark** each. **Section B** comprises 4 Very Short Answer questions of **2 marks** each. **Section C** comprises 3 Short Answer questions of **3 marks** each. **Section D** comprises 1 Long Answer question of **5 marks**. **Section E** comprises 2 Case Study Based questions of **4 marks** each.
- (iv) There is no overall choice. Internal choice is provided in Section E.
- (v) Use of calculators is not permitted.

SECTION - A

Questions 1 to 10 carry 1 mark each.

1. The malarial parasite divides into many daughter cells simultaneously. This organism and its mode of reproduction are
 - (a) Amoeba – binary fission
 - (b) Leishmania – binary fission
 - (c) Plasmodium – multiple fission
 - (d) Hydra – budding
2. Spirogyra, on maturation, breaks up into smaller pieces, each of which grows into a new individual. This is called
 - (a) budding
 - (b) fragmentation
 - (c) spore formation
 - (d) multiple fission
3. In bread mould (Rhizopus), the tiny ‘blob-on-a-stick’ structures that are involved in reproduction are
 - (a) hyphae
 - (b) sporangia
 - (c) buds
 - (d) fragments
4. Buds produced in the notches along the leaf margin fall on the soil and develop into new plants in
 - (a) rose
 - (b) Bryophyllum
 - (c) banana
 - (d) sugarcane
5. Which of the following plants bears unisexual flowers?
 - (a) Hibiscus
 - (b) Mustard
 - (c) Papaya
 - (d) None of these
6. In human beings, fertilisation normally takes place in the
 - (a) uterus
 - (b) ovary
 - (c) fallopian tube (oviduct)
 - (d) vagina
7. Which contraceptive method also helps to prevent the transmission of sexually transmitted diseases to some extent?
 - (a) Copper-T
 - (b) Oral pills
 - (c) Condom
 - (d) Surgical blocking of fallopian tubes

8. After fertilisation in a flower, the ovule and the ovary respectively develop into

- (a) fruit and seed
- (b) seed and fruit
- (c) embryo and seed
- (d) seed and embryo

In the following questions 9 and 10, a statement of Assertion (A) is followed by a statement of Reason (R). Mark the correct choice as:

- (a) Both (A) and (R) are true and (R) is the correct explanation of (A).
- (b) Both (A) and (R) are true but (R) is not the correct explanation of (A).
- (c) (A) is true but (R) is false.
- (d) (A) is false but (R) is true.

9. **Assertion (A):** In human males, the testes are located outside the abdominal cavity in the scrotum.

Reason (R): Sperm formation requires a lower temperature than the normal body temperature.

10. **Assertion (A):** Variation is useful for the survival of a species over time.

Reason (R): The process of DNA copying during reproduction is absolutely accurate.

SECTION - B

Questions 11 to 14 carry 2 marks each.

- 11. How does binary fission in Leishmania differ from that in Amoeba? How is multiple fission different from binary fission?
- 12. (a) How does an organism like Rhizopus benefit from reproducing through spores?
(b) Why can complex organisms not give rise to new individuals through regeneration?
- 13. State two advantages of vegetative propagation. Name two plants grown commercially by this method.
- 14. If each new generation were formed by combining the DNA of two individuals, every generation would have twice the DNA of the previous one. How do organisms solve this problem?

SECTION - C

Questions 15 to 17 carry 3 marks each.

- 15. (a) Differentiate between pollination and fertilisation.
(b) Distinguish between self-pollination and cross-pollination. Name two agents of cross-pollination.
(c) How does the male germ-cell reach the female germ-cell after pollination?
- 16. (a) State two functions of the testes.
(b) What is the role of the seminal vesicles and the prostate gland?
(c) Why is the urethra said to be a common passage?
- 17. (a) How does the uterus prepare itself every month?
(b) What happens if the egg is not fertilised? Name this process and state how long it usually lasts.
(c) How long does an unfertilised egg live?

SECTION - D

Question 18 carries 5 marks.

- 18. (a) Why does sexual reproduction generate more variation than asexual reproduction? Explain with an example how variation helps a species survive.
(b) Trace the path of the egg from its release to the formation of an embryo in human females.
(c) What is the placenta? Describe its structure and functions.

SECTION - E (Case Study Based Questions)

Questions 19 and 20 carry 4 marks each.

19. Study the diagram of the longitudinal section of a flower and answer the questions.

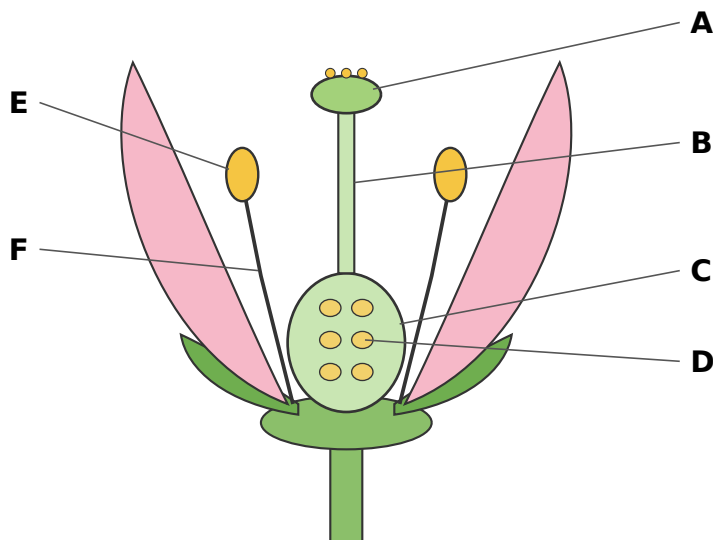


Figure: Longitudinal section of a flower

(a) Identify the parts labelled A and C. **(1)**

(b) Which labelled parts together make the male reproductive part? What does it produce? **(1)**

(c) Describe the events that take place after a pollen grain lands on part A until the seed and fruit are formed. **(2)**

OR

(c) Name the female reproductive part made up of A, B and C. Is this flower unisexual or bisexual? Give a reason, and name one plant with this type of flower. **(2)**

20. Read the passage and answer the questions that follow.

Sexual maturation is a gradual process, and some maturation does not mean that the body or mind is ready for sexual acts or for bringing up children. The sexual act can transmit diseases and always carries the possibility of pregnancy, which makes major demands on a woman's body and mind. Many contraceptive methods have been devised: some create a mechanical barrier, some change the hormonal balance of the body, some devices are placed in the uterus, and surgical methods can block the vas deferens or fallopian tubes. Surgery is sometimes misused for illegal sex-selective abortion of female foetuses.

(a) Name two bacterial and two viral sexually transmitted diseases. **(1)**

(b) A woman uses a copper-T. Will it protect her from sexually transmitted diseases? Justify. **(1)**

(c) Explain how (i) oral pills and (ii) surgical blocking of the vas deferens prevent pregnancy. State one drawback of each. **(2)**

OR

(c) Why has prenatal sex determination been prohibited by law? Why must the female-male sex ratio be maintained? **(2)**