

Time : 1 Hour 30 Minute

STD 10 Science
Chapter Based Test

Total Marks : 50

SECTION A

* Select and write one most appropriate option out of the four options given [7]
for each of the questions

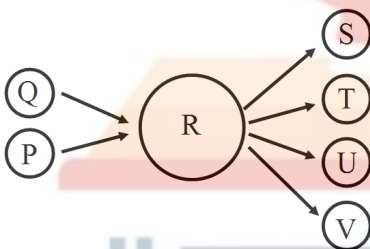
- Factors responsible for the rapid spread of bread mould on slices of bread are:
 - Large number of spores.
 - Availability of moisture and nutrients in bread.
 - Presence of tubular branched hyphae.
 - Formation of round shaped sporangia.

(A) (i) and (iii) (B) (ii) and (iv) (C) (i) and (ii) (D) (iii) and (iv)
- The male gametes in a flower and in a human are produced respectively in:

(A) Stigma and ovary. (B) Anther and style. (C) Ovary and testes. (D) Anther and testes.
- In Spirogyra, asexual reproduction takes place by:

(A) Breaking up of filaments into smaller bits. (B) Division of a cell into two cells. (C) Division of a cell into many cells. (D) Formation of young cells from older cells.
- In Rhizopus fungus, the fine thread-like structures spread on the whole surface of slice of bread are called:

(A) Rhizoids. (B) Stems. (C) Roots. (D) Hyphae.
- The diagram represents gametes P and Q fusing to give cell R. This cell then produces gametes S, T, U and V.



Which statement about the numbers of chromosomes in the cells and gametes is corrected.

- (A) The numbers of chromosomes in P and Q are different. (B) The numbers of chromosomes in P and Q are the same. (C) The numbers of chromosomes in S in one-quarter of chromosomes in R (D) The numbers of chromosomes in T is half the member of chromosomes in Q
- One of the following is a surgical method which prevents the sperms from reaching the ovum and pregnancy does not occur. This method is:
 - IUCD.

- b. Vasectomy.
- c. Condom.
- d. Tubectomy.

7. In human females, an event that indicates the onset of reproductive phase is:
- a. Growth of body.
 - b. Change in hair pattern.
 - c. Change in voice.
 - d. Menstruation.

*** Assertion - Reasoning based questions.**

[3]

8. For two statements are given-one labelled Assertion (A) and the other labelled Reason (R). Select the correct answer to these questions from the codes (a), (b), (c) and (d) as given below:
- a. Both A and R are true and R is correct explanation of the assertion.
 - b. Both A and R are true but R is not the correct explanation of the assertion.
 - c. A is true but R is false.
 - d. A is false but R is true.

Assertion: Stock is the lower part of a plant having the roots.

Reason: In grafting, the stock is placed over the scion.

9. **Directions:** In the following questions, the Assertions (A) and Reason(s) (R) have been put forward. Read both the statements carefully and choose the correct alternative from the following:

Assertion(A): Spores are unicellular bodies.

Reason (R): The parent body simply breaks up into smaller pieces on maturation.

- 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.
10. For two statements are given-one labelled Assertion (A) and the other labelled Reason (R). Select the correct answer to these questions from the codes (a), (b), (c) and (d) as given below:
- a. Both A and R are true and R is correct explanation of the assertion.
 - b. Both A and R are true but R is not the correct explanation of the assertion.
 - c. A is true but R is false.
 - d. A is false but R is true.

Assertion: Regeneration is getting a full organism back from its body parts.

Reason: Hydra and Planaria show regeneration.

*** Fill in the blank with correct answer.[1 Mark each]**

[2]

11. The menstrual cycle is controlled by _____.
12. Fill in the following blanks with suitable words:
The process of _____ ensures continuity of life on earth.

*** Answer the questions.[1 Mark each]**

[2]

13. Explain the term 'fertilisation'.
14. Name two fruit trees which are usually propagated by grafting method.

SECTION B

* Answer the following question. :

[10]

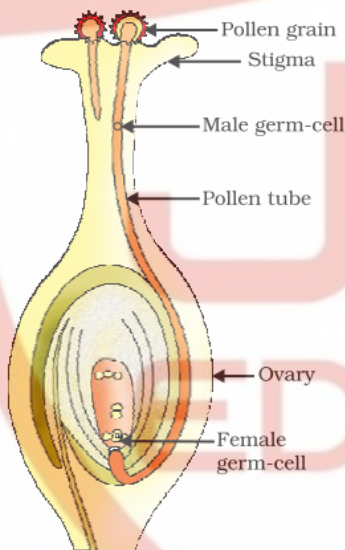
1. With the help of diagrams show the different stages of binary fission in Amoeba.
2. Why do green grass plants spring up in dry fields on their own after the rains?
3. State one genetically different feature between sperms and eggs of humans. What is its consequence?
4. What is the basic difference between asexual reproduction and sexual reproduction?
5. What is meant by contraception? What are the different methods of contraception?

SECTION C

* Answer short answer questions. [3 Mark each]

[12]

1. Name the parts A, B and C shown in the diagram and write their functions.



Germination of pollen on stigma

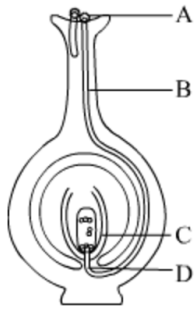
2. What is regeneration? Give one example of an organism that shows this process and one organism that does not. Why does regeneration not occur in the latter?
3. Describe the grafting method for the artificial propagation of plants with the help of labelled diagrams.
4. Describe the layering method for the artificial propagation of plants. Illustrate your answer with the help of a labelled diagram. Name any five plants which are propagated by the layering method.

SECTION D

* Long answer questions [5 Mark each]

[10]

1. a. Name the parts labelled as A, B, C and D in the diagram given below:



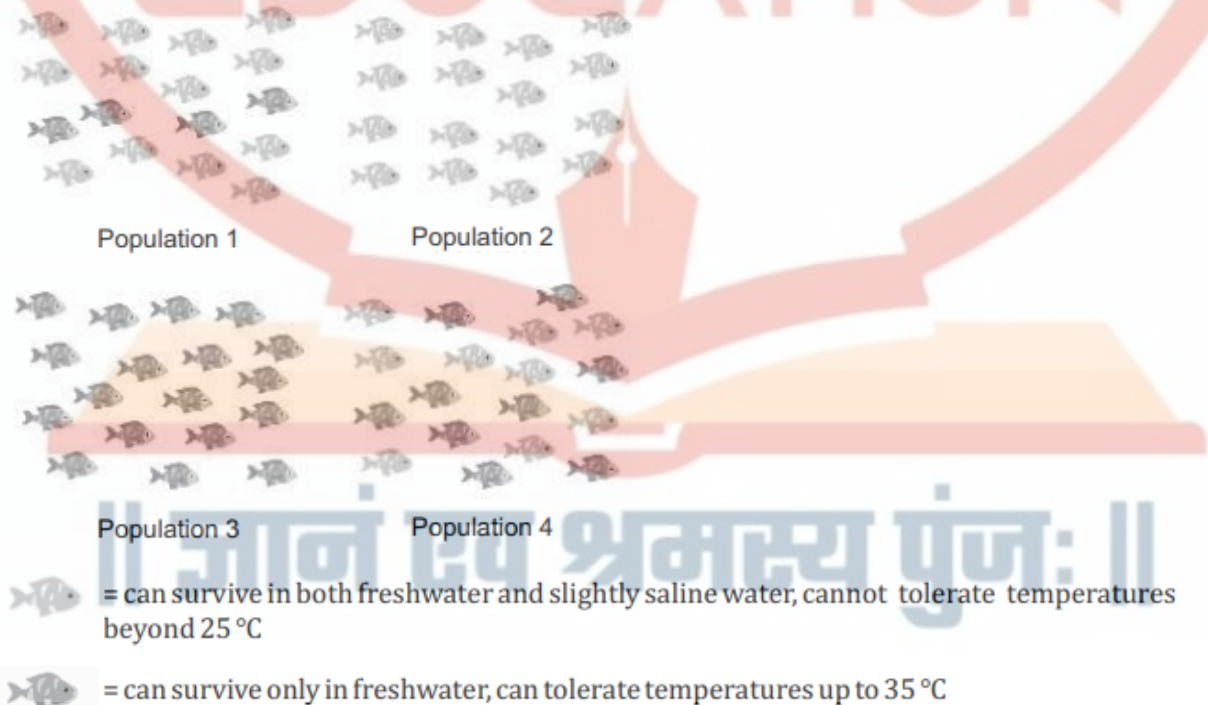
- b. What is pollination? State its significance.
 - c. How does fertilisation occur in flowers? Name the parts of the flower that develop into (i) seed, and (ii) fruit after fertilisation.
2. A woman uses pills A as a method of birth control (or preventing pregnancy). The pills A stop the ovaries from releasing ovum into oviducts. Another woman uses pills B as a method of birth control. The pills B kill the sperms and prevent pregnancy.
- a. What do the pills A contain?
 - b. What is the common name of pills A?
 - c. What do the pills B contain?
 - d. What is the common name of pills B?
 - e. What is the general name of these methods of birth control?

SECTION E

*** case - based/data -based questions**

[4]

1. The diagram shows four different populations of a freshwater fish. All fish belong to the same species but with two different adaptations.



1. Which population is most likely to survive a small increase in water salinity in its habitat?

- A. Population 1
- B. Population 2
- C. Population 3

D. Population 4

2. Which of these is responsible for the difference in adaptation within the fish species?

Circle 'Yes' or 'No' to mark your response.

Is this responsible for the difference in adaptation?	Yes or No
Difference in food source	Yes/No
Variations in DNA	Yes/No
Difference in age	Yes/No

