QB365 Question Paper Software
10th Standard - Science
How do Organisms Reproduce Assertion and reason

Exam Time: 00:20 Hrs | Date: 2025-10-11
Total Marks: 10

Questions:

Assertion and reason

1. **Assertion:** The DNA in the cell nucleus is the information source for making proteins.
Reason: The change in information makes different protein and leads to altered body design.
Codes
(a) If both assertion and reason are true and the reason is correct explanation of assertion.
(b). If both assertion and reason are true but reason is not a correct explanation of assertion.
(c) If assertion is true and reason is false.
(d) If both assertion and reason are false.

2. **Assertion:** Cells use chemical reactions to build copies of their DNA.
Reason:. These copies are used to form new cells.
Codes
(a) If both assertion and reason are true and the reason is correct explanation of assertion.
(b). If both assertion and reason are true but reason is not a correct explanation of assertion.
(c) If assertion is true and reason is false.
(d) If both assertion and reason are false.

3. **Assertion**: The female germ cell is called an egg and it contains the stored energy.
Reason: The egg contains energy in the form of stored food.
Codes
(a) If both assertion and reason are true and the reason is correct explanation of assertion.
(b). If both assertion and reason are true but reason is not a correct explanation of assertion.
(c) If assertion is true and reason is false.
(d) If both assertion and reason are false

4. **Assertion**: Stamen is the female reproductive part of the flower.
Reason: It produces pollen grains that are yellowish in colour and are female gametes.
Codes
(a) If both assertion and reason are true and the reason is correct explanation of assertion.
(b). If both assertion and reason are true but reason is not a correct explanation of assertion.
(c) If assertion is true and reason is false.
(d) If both assertion and reason are false

5. **Assertion:** The ovary releases one egg every month.
Reason: This process is repeated every month and is called menstruation.
Codes
(a) If both assertion and reason are true and the reason is correct explanation of assertion.
(b). If both assertion and reason are true but reason is not a correct explanation of assertion.
(c) If assertion is true and reason is false.
(d) If both assertion and reason are false

6. **Assertion:** Asexual reproduction is seen in small organisms
Reason: Budding is one type of asexual reproduction.
Codes
(a) If both assertion and reason are true and the reason is correct explanation of assertion.
(b). If both assertion and reason are true but reason is not a correct explanation of assertion.
(c) If assertion is true and reason is false.
(d) If both assertion and reason are false

7. **Assertion**: Multiple fission produces many daughter cells simultaneously.
Reason: Multiple fission occurs during favourable conditions.
Codes
(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.

8. **Assertion:** The testes are present outside the abdominal cavity of the body.
Reason: Sperm formation requires a lower temperature than the normal body temperature.
Codes
(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.

9. **Assertion:** Sexual reproduction leads to greater variety in population.
Reason: Sexual reproduction plays an important role in the origin of new species.
Codes
(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.

10. **Assertion (A)** Offspring produced by asexual reproduction are genetically similar to the parents.
Reason (R) Asexual reproduction involves a single parent.
(a) If both A and R are true and R is the correct explanation of A
(b) If both A and R are true, but R is not the correct explanation of A
(c) If A is true, but R is false
(d) If A is false, but R is true

Answers Key:

Assertion and reason

1. (b). If both assertion and reason are true but reason is not a correct explanation of assertion.
2. (b). If both assertion and reason are true but reason is not a correct explanation of assertion.
3. (a) If both assertion and reason are true and the reason is correct explanation of assertion.
4. (d) If both assertion and reason are false
5. (a) If both assertion and reason are true and the reason is correct explanation of assertion.
6. (b). If both assertion and reason are true but reason is not a correct explanation of assertion.
7. **(c) :** In multiple fission, the parent organism divides into many daughter cells at the same time during unfavourable conditions like deficiency of food or water and extremes of temperature. Production of large number of datghters increases the chances of survival of daughter cells.
8. **(a) :** The testes of a man lie in the small muscular pouch called scrotum outside the abdominal cavity. Being outside the abdominal cavity, the temperature of scrotum is about 2-3°C lower than the normal body temperature. It is because the sperm formation requires a lower temperature than the normal body temperature. So, the testes provide an optimal temperature for formation of sperms.
9. **(b):** In sexual reproduction the offsprings,although similar to their parents, are not identical tothem or to one another. This is because the offsprings receive some genes from the mother and some from the father. Because of the mixing of genes of mother and father in various different combinations, all the offsprings have genetic variations means that a species can adapt more quickly to changes in its environment. This is because there are always likely to be some individuals which are more suited to the changes than others, and these individuals will survive and reproduce themselves.
   Sexual reproduction plays an important role in the origin of new species having different characteristics.
10. (a) Both A and R are true and R is the correct explanation of A.
    Asexual reproduction is mode of reproduction that involves a single parent only.
    The new offspring produced by this method after cell division are genetically similar to their parents or are clone to their parents.