

Exam Time: 00:20 Hrs

Date: 29/09/2025

Roll No:

Total Marks: 10

Assertion and reason

10 x 1 = 10

1. **Assertion:** Transgenic food may cause toxicity or produce allergy.

Reason : Transgenic plants have high nutrient content.

Codes :

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

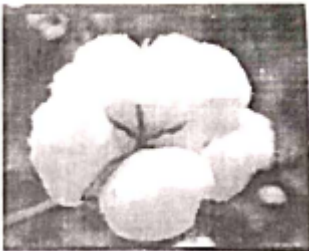
2. **Assertion :** PCR is routinely used for early diagnosis of HIV in suspected AIDS patients.

Reason : PCR can detect low amounts of DNA

Codes :

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

3. Study the diagram given below and answer the questions that follows.



Assertion (A) : Insect resistant transgenic cotton has been produced by inserting Bt gene.

Reason (R) : Bt gene is derived from a bacterium.

- (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

4. **Assertion:** Cellular defence mechanism in eukaryotes is RNAi.

Reason: RNAi is silencing of a specific tRNA.

Codes:

- (a) If both Assertion and Reason are true and Reason is the correct explanation of Assertion.
- (b) If both Assertion and Reason are true but Reason is not the correct explanation of

Assertion.

(c) If Assertion is true but Reason is false.

(d) If both Assertion and Reason are false.

5. **Assertion:** Due to excessive synthesis of gene for adenosine deaminase ADA deficiency disorder is caused.

Reason: It affects the human digestive system.

Codes:

(a) If both Assertion and Reason are true and Reason is the correct explanation of Assertion.

(b) If both Assertion and Reason are true but Reason is not the correct explanation of Assertion.

(c) If Assertion is true but Reason is false.

(d) If both Assertion and Reason are false.

6. **Statement I:** ADA deficiency can be treated by bone marrow transplantation and enzyme replacement therapy

Statement II: The above treatment are completely curative.

Codes:

a) Both statement I & Statement II are correct

b) Both statement I & Statement II are incorrect

c) Statement I is correct & Statement II are incorrect

d) Statement I is incorrect & Statement II are correct

7. **Assertion:** Flavr-savr, a transgenic tomato remains fresh for long time.

Reason : Production of Polygalacturonase enzyme, which degrades pectin was blocked in Flavr-savr.

Codes:

a) Both (A) and (R) are true and (R) is the correct explanation of (A)

b) Both (A) and (R) are true and (R) is not the correct explanation of (A)

c) (A) is true but (R) is false

d) Both (A) and (R) are false

8. **Assertion:** Probe is used to detect the presence of complementary strands.

Reason: Probe is a single stranded DNA or RNA tagged with radioactive isotopes.

Codes:

a) Both (A) and (R) are true and (R) is the correct explanation of (A)

b) Both (A) and (R) are true and (R) is not the correct explanation of (A)

c) (A) is true but (R) is false

d) Both (A) and (R) are false

9. **Assertion :** Milk of GM cow (Rosie) was more nutritionally balanced than natural milk of a cow

Reason : GM cow genome was supplemented by the human gene coding for alpha lactalbumin.

Codes:

a) Both (A) and (R) are true and (R) is the correct explanation of (A)

b) Both (A) and (R) are true and (R) is not the correct explanation of (A)

c) (A) is true but (R) is false

d) Both (A) and (R) are false

10. **Assertion (A):** Transgenic animals are being developed for chemical safety testing.

Reason (R) : Transgenic animals carry genes which make them more sensitive to toxic

substances than non transgenic animals and results obtain in less time

Codes:

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