

Competitive Exams: Botany MCQs (Practice-Test 4 of 104)

1. • **Assertion (A):** Polyspermy may bring about fertilization of synergies or antipodal.
 - **Reason (R):** The embryo sac is penetrated by more than one pollen tube.
 - 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

2. • **Assertion (A):** Any individual diploid organism can have only two alleles.
 - **Reason (R):** The population as a whole contains many different alleles of gene.
 - 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

3. • **Assertion (A):** Potato tubers do not sprout immediately after harvest.
 - **Reason (R):** Immediately after harvest, potato tubers contain high amount of abscisic acid which prevents sprouting.
 - 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

4. • **Assertion (A):** The Ti plasmid of *Agrobacterium tumefaciens* has been effectively used as a vector for gene transfer in plants.
 - **Reason (R):** Ti plasmids carry sites for insertion of foreign gene intended to be transferred.

- 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
5. • **Assertion (A):** A group of three nucleotides is the fundamental coding unit and the code is read linearly from left to the right end.
- **Reason (R):** The coding ratio estimated to be close to three is the evidence for the triplet codes.
- 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
6. • **Assertion (A):** Gene mapping is possible when crossing over occurs between homologous chromosomes.
- **Reason (R):** Gene mapping shows the relative distance between genes on a chromosome.
- 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
7. • **Assertion (A):** Intercellular differentiation is the cause of intracellular differentiation.
- **Reason (R):** Intercellular differentiation is the process of sequential reorganization which redistributes differential cells and triggers new intracellular differentiation.
- 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

8. • **Assertion (A):** When chromosomes are broken by exposure to high energy radiation such as X-ray, the resulting broken ends exhibit a pronounced tendency to stick to each other and fuse.
- **Reason (R):** The broken ends resulting from irradiation does not contain telomere.
- Both A and R are true and R is the correct explanation of A
 - Both A and R are true but R is NOT the correct explanation of A
 - A is true but R is false
 - A is false but R is true
9. • **Assertion (A):** Even though municipal sewage contains a lot of biodegradable organic substances, its discharge into rivers makes the area uninhabitable for fish and other vegetation.
- **Reason (R):** Sewage water also contains inorganic substances and pathogenic bacteria. Which normally is not a part of the aquatic ecosystem.
- Both A and R are true and R is the correct explanation of A
 - Both A and R are true but R is NOT the correct explanation of A
 - A is true but R is false
 - A is false but R is true
10. • **Assertion (A):** The recombination frequencies and map distances do not correspond in large linkage maps.
- **Reason (R):** Large map distances cannot be measured accurately due to the occurrence of multiple crossovers.
- Both A and R are true and R is the correct explanation of A
 - Both A and R are true but R is NOT the correct explanation of A
 - A is true but R is false
 - A is false but R is true
11. • **Assertion (A):** All our insectivorous plants are on the verge of extinction.
- **Reason (R):** These plants are grown in green houses.
- 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

12. • **Assertion (A):** C₄ plants are 'high efficiency' photosynthesizes.

• **Reason (R):** These plants have high levels of photosynthesis per unit of water lost.

- 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

13. • **Assertion (A):** During stomata opening starch is degraded in the guard cells to soluble phosphorylated hexose's which are then converted to oxaloacetate, maltase, etc. Through glycol sis and TCA cycle.

• **Reason (R):** As the guard cells contain chloroplasts, the starch, that is degraded, is synthesized from the photosynthetic products formed in the guard cells.

- 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

14. • **Assertion (A):** Oryza sativa is more efficient in photosynthesis than Zea mays.

• **Reason (R):** The CO₂-comperisation point of Oruza sativa is much higher than that of Zea mays.

- 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