

Chapter 6
Plant Breeding and Genetic Modification

1. Which of the following statements are TRUE for genetic markers?
(A) A gene or a DNA sequence
(B) Associated with a particular trait
(C) Anything can be used as a genetic marker
(D) The first genetic map was prepared was of fruit fly
2. Which of these are variety of wheat?
(A) Sonora -64
(B) Norin-10
(C) Rojo-64
(D) Deccan-115
3. IR-36 was developed through breeding
(A) 6 rice varieties
(B) *Oryza nivara*
(C) *Oryza indica*
(D) 13 rice varieties
4. Which of the following are used for crop improvement?
(A) Inbreeding
(B) Introduction
(C) Hybridization
(D) Mutations
5. RFLP is used to
(A) construct high resolution linkage map
(B) identify single gene diseases
(C) identify a specific DNA
(D) construct QTL map
6. Simple sequence repeats are
(A) 1-6 bp long sequences distributed along the chromosome
(B) molecular marker
(C) also called a micro satellite
(D) individual specific in number and position
7. Which of the following are TRUE about the helper plasmids?
(A) These can replicate in *Agrobacterium*
(B) These help in the mediating conjugation of intermediate vectors
(C) These can't replicate in *Agrobacterium*
(D) They are derivative of Ti plasmid
8. Crown gall tissue
(A) can be cultivated in vitro in absence of bacteria
(B) retains tumorous properties when cultivated
(C) shows tumorous properties only in presence of bacteria

(D) unable to move water and nutrients up the trunk

9. Many bacterial species are having a natural ability to take up the exogenous DNA material. Which of the statements are CORRECT in regard to it?
- (A) This ability is termed as competence
 - (B) It is not limited to particular growth phases
 - (C) The bacteria may develop new biochemical abilities under special conditions such as nutrient deprivation
 - (D) Induction of specific set of bacterial proteins may take place
10. Opines are
- (A) amino acid derivatives found in tumor tissues
 - (B) amino acid derivatives found in normal tissues
 - (C) pathogenic bacteria found in *Agrobacterium tumefaciens*
 - (D) Pathogenic bacteria found in *Salmonella typhimurium*

Answer

- 1. (A), (B), (D)
- 2. (A), (B), (C)
- 3. (B), (D)
- 4. (B), (C), (D)
- 5. (A), (B), (D)
- 6. (A), (C), (D)
- 7. (B), (C), (D)
- 8. (A), (B), (D)
- 9. (A), (C), (D)
- 10. (A), (C)