



# BIOLOGY

## BOOKS - PREMIERS PUBLISHERS

### PLANT BREEDING

#### Textbook Questions Answers

**1. Assertion (A):** Genetic variation provides the raw material for selection.

Reason (R): Genetic variations are differences in genotypes of the individuals.

A. Assertion is right and reason is wrong.

B. Assertion is wrong and reason is right.

C. Both reason and assertion is right.

D. Both reason and assertion is wrong.

**Answer: A**



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2. While studying the history of domestication of various cultivated plants were recognized earlier.

- A. Centres of origin
- B. Centres of domestication
- C. Centres of hybrid
- D. Centres of variation

**Answer: B**



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3. Pick out the odd order .

A. Mass selection - morphological characters.

B. Pureline selection - Repeated self pollination.

C. Clonal selection - sexually propagated.

D. Natural selection Involves nature.

**Answer: C**



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4. The quickest method of plant breeding is

A. Introduction

B. Selection

C. Hybridization

D. Mutation breeding

**Answer: A**



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5. Desired improved variety of economically useful crops are raised by

A. Natural selection

B. Hybridization

C. Mutation

D. Biofertilisers

**Answer: C**



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6. Plants having similar genotypes produced by plant breeding are called

A. Clone

B. haploid

C. autopolyploid

D. genome

**Answer: A**



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7. Importing better varieties and plants from outside and acclimatising them to local environment is called

A. cloning

B. heterosis

C. selection

D. introduction

**Answer: D**



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8. Dwarfing gene of wheat is

A. pal 1

B. Atomita 1

C. Norin 10

D. pelita 2

**Answer: C**



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9. Crosses between the plants of the same variety are called

- A. interspecific
- B. inter varietal
- C. intra varietal
- D. inter generic

**Answer: C**



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10. Progeny obtained as a result of repeat self pollination of a cross pollinated crop is called

- A. pure line
- B. pedigree line
- C. inbreed line
- D. heterosis

**Answer: C**



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11. Jaya and Ratna are the semi dwarf varieties of

A. wheat

B. rice

C. cowpea

D. mustard

**Answer: B**



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12. Which one of the following are the species that are crossed to give sugarcane varieties with high sugar, high yield, thick stems and ability to grow in the sugarcane belt of North India?

A. *Saccharum robustum* and *Saccharum officinarum*.

B. *Saccharum barberi* and *Saccharum officinarum*

C. *Saccharum sinense* and *Saccharum officinarum*

D. *Saccharum barberi* and *Saccharum robustum*.

**Answer: B**



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**13.** A wheat variety, Atlas 66 which has been used as a donor for improving cultivated wheat, which is rich in

A. iron

B. carbohydrates

C. proteins

D. vitamins

**Answer: C**



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**14.** Which of the following is incorrectly paired?

A. Wheat - Himgiri

B. Milch breed- Sahiwal

C. Rice - Ratna

D. Pusa Komal-Brassica

**Answer: D**



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**15.** Differentiate primary introduction from secondary introduction.



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**16.** How are microbial inoculants used to increase the soil fertility?



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**17.** What are the different types of hybridization?



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**18.** Explain the best suited type of breeding followed by plant breeders at present?



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**19.** Write a note on heterosis.



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**20.** List out the new breeding techniques involved in developing new traits in plant

breeding .



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## Other Important Questions Answers | Choose The Correct Answer

1. The method of creation of genetic variation includes:

A. Mutation

B. Hybridization

C. Vegetative propagation

D. Tissue culture

**Answer: C**



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2. Objective of plant breeding is :

A. to increase yield

B. to decrease tolerance to disease

C. to increase sensitivity to salinity

D. to prevent synchronous maturity.

**Answer: A**



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**3.** The introduction of foreign genes into DNA of a plant for the first time in the year :

A. 1940

B. 1985

C. 1994

D. 2000

**Answer: C**



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**4. Bacterial blight resistance was achieved in :**

A. Wheat

B. Cowpea

C. Chilli

D. Cauliflower

**Answer: B**



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**5. Choose the odd man out.**

A. E.Borlaug

B. M.S.Swaminathan

C. Nel jayaraman

D. N.G.P.Rao

**Answer: C**



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6. Find out the odd one out.

A. Mutation

B. Gene transfer

C. Cytoplasmic fusion

D. Polyploidy

**Answer: C**



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7. Indicate the odd one out (Bio fortification)

A. Protein content

B. Fat content

C. Vitamin content

D. Gibberellin content.

**Answer: D**



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8. Choose the odd one out (NBT).

A. Plant tissue culture

B. Genetic Engineering

C. Heterosis

D. Somatic hybridization.

**Answer: C**



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9. Assertion : Organic agriculture is a production system that sustains the health of the soils, ecosystem and the people.

Reason : Organic agriculture relies on ecological processes, biodiversity and cycles adapted to local conditions rather than the use of inputs with adverse effect.

A. Assertion and Reason are correct,  
Reason is the correct explanation of  
Assertion .

B. Assertion and Reason are correct,

Reason is not the correct explanation of

Assertion.

C. Assertion is correct, Reason is not

correct.

D. Assertion is not correct, Reason is

correct.

**Answer: A**



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**10. Assertion :** Bio fertilizers are ecofriendly agro inputs.

**Reason :** They are cost effective and efficient than chemical fertilizers.

A. Assertion and Reason are correct, Reason is the correct explanation of Assertion .

B. Assertion and Reason are correct, Reason is not the correct explanation of Assertion.

C. Assertion is correct, Reason is not correct.

D. Assertion is not correct, Reason is correct.

**Answer: B**



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**11. Assertion (A) :** Rhizobium is best suited for the paddy fields.

**Reason (R) :** It increases the yield from 15-40%

A. Assertion and Reason are correct,  
Reason is the correct explanation of  
Assertion.

B. Assertion and Reason are correct,  
Reason is not the correct explanation of  
Assertion.

C. Assertion is correct, Reason is not  
correct.

D. Assertion is not correct, Reason is  
correct.

**Answer: A**



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**12. Assertion :** Trichoderma is a symbiotic fungi, that are common in soil and root ecosystem.

**Reason :** They have been recognized as bio-control agent for the plant disease.

**A. Assertion and Reason are correct,**

**Reason is the correct explanation of**



Assertion.

B. Assertion and Reason are correct,

Reason is not the correct explanation of

Assertion.

C. Assertion is correct, Reason is not

correct.

D. Assertion is not correct, Reason is

correct.

**Answer: C**



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**13.** Which of the following statement is correct ?

A. Most important green manure crops are Vinca rosea, Crotalaria and Thespecia.

B. Most important green manure crops are Indigotera, Abitelon and Banian tree.

C. Most important green manure crops are Crotalaria juncea, Tephrosia purpurea, and Indigofera tinctoria.

D. None of the above.

**Answer: C**



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**14. Choose the incorrect statement**

A. The aim of plant breeding is to increase yield.

B. The aim of plant breeding is to increase the fertility of crop.

C. The aim of plant breeding is to increase tolerance to environmental conditions.

D. All the above statements are not correct.

**Answer: D**



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**15. Find out the correct statement.**

A. William S.Gaud coined the term mutation breeding.

B. Muller and Stadler coined the term green revolution.

C. M.S. Swaminathan is pioneer mutation breeder.

D. Nel jayaraman hails from Andhra Pradesh.

**Answer: C**



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**16.** Indicate the incorrect statement.

A. Wheat variety Atlas 66 have high protein content.

B. Wheat variety Atlas 66 have less protein content.

C. Wheat variety Atlas 66 have been used as donor for improving cultivated wheat.

D. None of the above.

**Answer: B**

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## Other Important Questions Answers li Answer The Following

1. Write a note on organic farming.



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2. Mention any two advantage of bio  
fertilizers.



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3. Mention any two free - living nitrogen fixing bacteria.



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4. What is the importance of root nodule?



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5. What are the roles of Arbuscular mycorrhizae in soil fertility?



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6. What are Bio-pesticides?



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7. Name any two green manure crops.



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**8. Define plant breeding.**



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**9. Define mutagenesis.**



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**10. What is hybridization?**



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**11. Define Pseudoheterosis.**



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**12. What are polyploids ? Mention its nature.**



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**13. What is Green Revolution?**



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**14. Define Biofortification.**



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**15. Mention any two methods of New Plant Breeding Techniques (NBT).**



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**Other Important Questions Answers Iii Answer  
The Following**

1. What is organic agriculture?



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2. What are the characteristics of bio fertilizers ?



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3. What are the advantages of Arbuscular mycorrhizae (AM) ?



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4. Distinguish between mass selection and Pureline selection.



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5. Who coined the term mutation breeding ?  
Write its advantages.



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6. What are vegetables fortified with nutrients released by the Agricultural Research Institute ?



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7. List the plants resistance to insect pests developed through plant breeding.



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# Other Important Questions Answers Iv Answer The Following

1. Explain polyploid breeding.



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2. What are the objectives of plant breeding?



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3. List out the possible changes occur in the plant species due to domestication.



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4. Draw the diagram showing the benefits of Am colonization and label.



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5. Liquid seawater fertilizer is not only organic but also eco-friendly. Justify,



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