Avinashilingam Institute for Home Science and Higher Education for Women

(Deemed to be University under Category 'A' by MHRD, Estd. u/s 3 of UGC Act 1956)
Re-accredited with 'A+' Grade by NAAC. Recognised by UGC Under Section 12B
Coimbatore - 641 043, Tamil Nadu, India

Bacgelor's Degree Examination - January 2021
V Semester

Class : III UG **Time : 3 Hours**
Major : Botany **Max. Marks: 100**

18BBOC14 Plant Breeding and Seed Technology

PART A **10 x 1 = 10**
Choose the Correct Answer

1. Plant breeding is a technique of improving

a. Agricultural crops b. Fodder crops
c. Fruit varieties d. All the above

2. Modern plant breeding started in

a. 1850 b.1880 c. 1900 d. 1930

3. Heterosis is

a. Appearance of spontaneous mutation b. Induction of mutation
c. Mixture of two or more triads d. Superiority of hybrids over their parents

4. Pure line breed refers to

a. Heterozygosity only b. Homozygosity and self-assortment
c. Homozygosity only d. Heterozygosity and linkage.

5. Bagging is done to

a. Avoid cross pollination b. Avoid self pollination
c. Achieve desired pollination d. Prevent contamination from foreign pollen.

6. Desired improved varieties of economically useful crops are raised by

a. Migration b. Biofertilizer
c. Hybridisation d. Natural selection

7. Germination is inhibited by

a. Red light b. Blue light c. UV light d. IR light

8. Viability of the seed is tested with

a. Triphenyl Tetrazolium chloride b. IAA
c. Mercuric chloride d. 2,4 D

9. Certified seeds of cotton should have minimum germination of

a. 50% b.60% c. 70% d.80%

10. In grafting, the rooted plant is called the stock. The stem cutting from the donor plant is called

a. Transplant b. Scion
c. Bud craft d. Rootstock

Part B **5 x 6 = 30**

Answer ALL questions

Each answer should not exceed 400 words or two pages

11.a. List out the objectives and the history of plant breeding.

(or)

11.b. Briefly explain any one agro climate-based crops.

12.a. Give a short account on types of pollination.

(or)

12.b. Comment on Heterosis.

13.a. What is back cross method? Explain.

(or)

13.b. Discuss the merits and demerits of breeding methods.

14.a. Draw and explain the structure of dicot seed.

(or)

14.b. Explain the different types of seed storage.

15.a. Write the objectives and concepts of seed certificate.

(or)

15.b. Discuss on different classes of seed.

Part C **5 x 12 = 60**

Answer ALL questions

Each answer should not exceed 800 words or four pages

16.a. Give a detailed account on Germ plasm collection and seed bank.

(or)

16.b. Describe the role of IBPGR and NBPGR.

17.a. Write an essay on selection.

(or)

17.b. Explain the hybridization technique.

18.a. Comment on pedigree and bulk methods.

(or)

18.b. What is molecular markers? Explain in detail.

19.a. Write a detailed account on seed dormancy and seed viability.

(or)

19.b. Explain the importance of seed moisture.

20.a. Write the procedure for seed certification.

(or)

20.b. Explain the various types of vegetative propagation.

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