16939

BRAINWARE UNIVERSITY

Term End Examination 2024-2025
Programme – B.Sc.(Ag)-Hons-2021/B.Sc.(Ag)-Hons-2022
Course Name – Crop Improvement-II (Rabi Crops)
Course Code - CC-BAG676 (T)/CC-BAG676(T)
(Semester VI)

Full Marks : 50 **Time : 2:0 Hours**

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question) 1 x 20=20

1. *Choose the correct alternative from the following :*

(i) Interpret the square root of variance from from the following.
a) Standard deviation b) Heritability
c) Genetic advance d) None of these

(ii) Identify the ways which are used to reduce error in an experiment.
a) Replication b) Randomisation
c) Local control d) All of these

(iii) Relate which of the following is a farmer variety.
a) Obsolete variety b) Landraces
c) Mutant line d) Breeding lines

(iv) Select the chromosome number of endosperm of wheat.
a) 42 b) 21
c) 63 d) 14

(v) Identify the result of megasporogenesis of a single cell.
a) Four functional cells b) Seven functional cells
c) One functional cell d) Eight functional cell

(vi) Identify the breeding method where maximum expertise of a breeder is required.
a) Mass Selection b) Pedigree Method
c) Bulk Method d) Single seed decent method

(vii) Recall the term given to the farmers variety from the following.
a) Land race b) Obsolete variety
c) Wild relatives d) Modern cultivars

(viii) Infer under which category gene sanctuary falls from the following.
a) In-situ germplasm conservation b) Ex-situ germplasm conservation
c) Can be considered under both the categories d) None of the mentioned options

(ix) Identify the term given to the seeds which cannot be stored under low temperature and humidity.

a) Orthodox seed
b) Recalcitrant seed
c) Core seed
d) Foundation seed

(x) Identify from which generation onwards, selection can be practised.

a) F1
b) F2
c) F3
d) F4

(xi) Identify the corner stone of plant breeding.

a) Introduction
b) Domestication
c) Selection
d) Acclimatisation

(xii) Infer the genetic constitution of Triticum aestivum.

a) AABBCC
b) AABBDD
c) AABB
d) BBDD

(xiii) Recall the term given to the varieties not in use currently.

a) Land race
b) Obsolete variety
c) Wild relatives
d) Modern cultivars

(xiv) Identify the pre-requisite of a plant breeding programme.

a) Introduction
b) variability
c) Selection
d) Acclimatisation

(xv) Infer the chromosome number of Triticum monococcum.

a) 21
b) 42
c) 7
d) 14

(xvi) Recall the genetic constitution of Triticum aestivum.

a) AABBCC
b) AABBDD
c) AABB
d) AA

(xvii) Recall the scientific name of cultivated oats

a) Avena sativa
b) Avena fatua
c) Triticum aestivum
d) Hordeum vulgare

(xviii) Which of the following is an example of amphidiploid.

a) B.campestris
b) T.aestivum
c) T.monococcum
d) B.juncea

(xix) Select the ideal sowing time of wheat.

a) Nov-Dec
b) Jun-July
c) March-Apri
d) April-May

(xx) Infer the botanical name of Rapeseed.

a) Brassica juncea
b) Brassica campestris
c) Brassica olerecea
d) Brassics nigra

Group-B

(Short Answer Type Questions) 2.5 x 10=25

2. Infer why population improvement is important for cross pollinated crops. (2.5)
3. What is gene pool. (2.5)
4. Determine the ex-situ germplasm conservation methods. (2.5)
5. Estimate the chromosome number of the endosperm of wheat. (2.5)
6. What is the scientific name and family of Rapeseed. (2.5)
7. Assess the parentage and genetic constitution of Brassica juncea. (2.5)
8. What is the chromosome number of Brassica juncea and Brassica oleracea. (2.5)
9. Explain the origin of cultivated bred wheat. (2.5)
10. Infer the steps of ideotype breeding. (2.5)
11. Compare between traditional breeding approach and ideotype breeding approach. (2.5)

OR

Assess the genetic constitution of Triticum dicoccum and Triticum aestivum. (2.5)

Group-C

(Long Answer Type Questions) 5 x 1=5

12. Discuss about the various categories of germplasm. (5)

OR

Construct the steps of ideotype breeding. (5)

****