4. Describe in detail the process of breeding for disease resistance. 12

OR

Describe in detail techniques of production of haploids and add a note on their significance. 12

5. Comment on :
   (a) Seed quality control 4
   (b) Concept of genetic purity 4
   (c) Certified seeds 4

OR

   (d) Anthesis 4
   (e) Characteristics of sowing quality seeds 4
   (f) Self incompatibility 4

6. Describe in detail the hybrid seed production. 12

OR

Give an account of factors affecting the areas of seed production. 12

7. Comment on :
   (a) Agronomic management in wheat 4
   (b) Planning and organisation in seed production 4
   (c) Handling of harvested seeds 4

OR

   (d) Harvesting and thrashing in soybean seed production 4
   (e) Seed production procedure in maize 4
   (f) Indian seed industry 4

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B.Sc. (Part–I) Semester–II Examination

SEED TECHNOLOGY (Voc.)

(Plant Breeding Methods for Crop Improvement & Seed Production)

Time—Three Hours] [Maximum Marks—80

Note :– (1) There are **SEVEN** questions in all.
(2) Question No. 1 is compulsory and carries 8 marks.
(3) Question Nos. 2 to 6 carry equal marks
(4) Draw well labelled diagrams wherever necessary.

1. (A) Fill in the blanks :
   (i) Back cross method refers to the cross between F_1 hybrid and _____. ½
   (ii) Heterosis results in _____ in size of plant. ½
   (iii) The term 'pure line' was first introduced by _____. ½
   (iv) Tissue culture is the _____ growth of cells, tissues and organ. ½

(B) Choose the correct alternatives (MCQ) :

(v) Pure line breed refers to

(a) Heterozygosity only

(b) Homozygosity only

(c) Heterozygosity and linkage

(d) Homozygosity and self assortment ½

(vi) Bagging is done to :

(a) Avoid cross pollination

(b) Avoid self pollination

(c) Achieve desired pollination

(d) Avoid contamination from foreign pollerns ½

(vii) Breeding for disease resistance requires.

(a) A good source of resistance

(b) Planned hybridization

(c) Disease test

(d) All of these ½

(viii) Self pollinated homozygous plant is a progeny of :

(a) Female parent in hybrid

(b) Pure line

(c) In bred

(d) Male parent in hybrid ½

(C) Answer in **ONE** sentence :

(ix) Where International Rice Research Institute is situated ? 1

(x) What is dihybrid ratio of Mendel ? 1

(xi) Define pure line selection. 1

(xii) What is mutation ? 1

2. Comment on :

(a) Limitation of clonal selection 4

(b) Acclamatistion 4

(c) Herbarium preparation 4

OR

(d) Advantages of pure line selection 4

(e) Law of segregation 4

(f) Plant exploration 4

3. (a) Difference between pure line selection and clonal selection 4

(b) Types of hybridization 4

(c) Development of inbred lines 4

OR

(d) Merits and demerits of mass selection 4

(e) Advantages of heterosis 4

(f) Development of double cross hybrid 4