

AP-429

5. Discuss in brief :

- (a) Classification of crop plants in relation to mode of reproduction 6
- (b) Male sterility and self incompatibility. 6

OR

- (p) Varietal purity and its maintenance 6
- (q) Methods of maintenance of genetic purity. 6

6. Comment on :

- (a) Seed production of forage legumes 4
- (b) Insect pest and disease incidence 4
- (c) Seed village concept. 4

OR

- (p) Improvement of pollination for hybrid seed production 4
- (q) Factors affecting seed production 4
- (r) Emasculation. 4

7. Comment on :

- (a) Harvesting and threshing in wheat 4
- (b) Agronomic management in mustard 4
- (c) Effect of environment before and after harvest on seed quality. 4

OR

- (p) Indian seed industries 4
- (q) Harvesting and threshing in maize 4
- (r) Agronomic management in sesame. 4

B.Sc. (Part-I) Semester-II Examination**SEED TECHNOLOGY (Vocational)****(Plant Breeding Methods for Crop Improvement and 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) Plant introduction consists of taking a genotype of plant into new _____. $\frac{1}{2}$
- (ii) _____ are trips for the purpose of collection of various forms of crop plant. $\frac{1}{2}$
- (iii) Crossing of plants of dissimilar genotype is known as _____. $\frac{1}{2}$
- (iv) _____ is the oldest breeding scheme available for cross pollinated crops. $\frac{1}{2}$

(B) Choose the correct alternative :

(v) A clone is a group of plants produced from a single plant through _____ reproduction.

- (a) Sexual
- (b) Asexual
- (c) Both
- (d) None 1/2

(vi) Heteroploidy that involve one or more complete genome is know as _____ :

- (a) Euploidy
- (b) Polyploidy
- (c) Heteroploidy
- (d) None 1/2

(vii) Heterozygous means an individual having _____ alleles of genes.

- (a) Similar
- (b) Dissimilar
- (c) Both
- (d) None 1/2

(viii) _____ is external appearance of an individual with reference to single character.

- (a) Genotype
- (b) Phenotype
- (c) Both
- (d) None 1/2

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

- (ix) What is segregation ? 1
- (x) What is single cross ? 1
- (xi) What is emasculation ? 1
- (xii) What is tetraploid ? 1

2. Comment on :

- (a) Achievements through clonal selection 4
- (b) Field techniques of pure line selection 4
- (c) Acclimatization . 4

OR

- (p) Gene interaction 4
- (q) Advantages and limitations of pure line selection 4
- (r) Merits of Introductions. 4

3. Comment on :

- (a) Merits and demerits of mass selection 4
- (b) Mutagens 4
- (c) Hybridization techniques in self pollinated crops. 4

OR

- (p) Heterosis in self pollinated crops 4
- (q) Achievement in fruit crops by hybridization 4
- (r) Differences between mass selection and pureline selection. 4

4. Define Polyploidy. Mention different type of polyploids and comment on evolution of crops through polyploidy breeding. 12

OR

Discuss in brief :

- (a) Breeding for disease resistance 6
- (b) Agricultural Research Institutes in India. 6