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B—92—2019

FACULTY OF SCIENCE

B.Sc. (First Year) (Second Semester) EXAMINATION

MARCH/APRIL, 2019

(CBCS/CGPA Pattern)

BOTANY

Paper-IV

(Genetics and Plant Breeding)

(MCQ & Theory)

(Friday, 29-03-2019)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

N.B. :— (i) Attempt All questions.

(ii) All questions carry equal marks.

(iii) Draw well labelled diagrams wherever necessary.

MCQ

1. (i) Mendel's experiments were carried on.....plants.

(a) Pigeon Pea

(b) Chick pea

(c) Wheat

(d) Garden pea

(ii) The tendency of offspring to differ from parent is called.....

(a) Heredity

(b) Variation

(c) Inheritance

(d) Resemblance

(iii) Phenotypic ratio of dihybrid cross is.....

(a) 3 : 1

(b) 9 : 7

(c) 9 : 3 : 3 : 1

(d) 1 : 1

P.T.O.

- (iv) Sex chromosomes were discovered by.....
- (a) Correns (b) De Vries
(c) Watson (d) Morgan
- (v) Trisomy is.....
- (a) $2n + 1$ (b) $2n - 1$
(c) $2n + 2$ (d) $2n - 1 - 1$
- (vi) Raphanobrassica is an example of.....
- (a) Antipolyploidy (b) Hypopolyploidy
(c) Allopolyploidy (d) Hyperpolyploidy
- (vii) The removal of anther from female parent is.....
- (a) Hybridization (b) Emasculation
(c) Crossing (d) None of these
- (viii) Heterosis is also called as.....
- (a) Variation (b) Mutation
(c) Hybrid vigour (d) Depression
- (ix) Adjustment and adaptation of plant to new locality is.....
- (a) Hybridization (b) Selection
(c) Mutation (d) Acclimatization
- (x) Many plant diseases, pests and weeds entered in India due to.....
- (a) Plant introduction (b) Selection
(c) Mutation (d) Hybridization

Theory

2. Describe supplementary gene action with suitable example. 10

Or

Write notes on :

- (a) Sex determination in birds
- (b) Hexaploid wheat.

3. Describe sex linked inheritance in man with reference to haemophilia.

Or

Write notes on :

- (a) Pureline selection
- (b) Bagging in hybridization.

4. What is mutational breeding ? Describe procedure and application of mutational breeding. 10

Or

Write notes on :

- (a) CMS—Cytoplasmic Male Sterility
- (b) Application of hybridization.