

# Assignment

Class -12

Subject: Bio Botany

## Unit 2

### Chapter 2 - Classical Genetics

#### Part - A

#### I. One mark questions

- The dominant epistasis ratio is
  - 9:3:3:1
  - 12:3:1
  - 9:3:4
  - 9:6:1
- Fruit colour in squash is an example of
  - Recessive epistasis
  - Dominant epistasis
  - Complementary genes
  - Inhibitory genes
- The term Genetics was introduced by\_\_
  - Gregor Johann Mendel
  - Erich Von Tscermak
  - W.Bateson
  - Carl Correns
- A gene can exist in alternate forms for the same trait is called \_\_\_\_
  - Hybrids
  - Alleles
  - Hereditary units
  - Factors
- Observable characteristic of an organism is.
  - Genotype
  - Phenotype
  - Hybrid
  - Variation
- The result of Mendel's dihybrid cross led him to propose\_\_\_\_
  - Law of dominance
  - Law of segregation
  - Law of independent assortment
  - Law of hybrid
- It is a genetic cross which involves individuals diffusing in two characters.
  - Monohybrid cross
  - Trihybridcross
  - Dihybridcross
  - Test cross

8. Introgenic interaction does not includes\_\_.

- a) Complete dominance
- b) Codominance
- c) Incomplete dominance
- d) Multiple alleles

9. An allele which has the potential to cause the death of an organism is called\_\_.

- a) Multiple alleles
- b) Lethal allele
- c) Single allele
- d) Dominant allele

10. Dominant epistasis is found in\_\_ .

- a) Antirrhinum
- b) Squash fruit
- c) Garden pea
- d) Wheat

### **Part – B**

#### **II. Very Short Answer.**

1. Define Genetics?
2. What is Population Genetics?
3. What is Codominance?
4. What are the 4 types of gametes formed by the influence of dihybridcross
5. What is Dihybrid cross?

### **Part – C**

#### **III. Short Answer.**

1. What is incomplete dominance.
2. What is epistatic.
3. What is Reciprocal cross.
4. Define Genetics.
5. Define Atavism.

### **Part – D**

#### **IV. Write in detail.**

1. Write the importance of variations.
2. Explain incomplete dominance in *Mirabilis jalapa*.