Assignment

Class -12 **Subject:Botany**

Unit 2

Classical Gentics

Part - A

I.Choose the correct Answer

1. The genotype of a plant showing the dominant phenotype can be determined
   a) Back cross b)Test cross
   c) Dihybrid cross d)Pedigree cross
2. The complementary genes ratio is…..
   a) 9:3:4 b) 12:3:1
   c) 13:3 d) 9:7
3. In his classic experiments on pea plants, Mendel did not use
   a) Flowering position b)Seed colour
   c) Pod length d) Seed shape

4.If absence of starch resulting in wrinkled peas in which enzyme is catalyzes the formation of starch molecule.
   a)Amylase b)Invertase
   c)Diastase d)Starch branching enzyme

5.An allele to kill an organism is called lethal gene, who coined the term lethal?

   (a) E.Baur (b) Mendel
   (C) Corren (d) Hugo de vries

6. The phenomenon in which two alleles are both expressed in the heterozygous individual is known as
   (a) Recessive (b) Dominant
   (c) Co-dominance (d) Epistasis

7.Pick out wrong one
   a) Dominant allele- RR (b)Recessive allele- rryy
   c) Difference traits – RrYy (d)Recessive traits- RRYY

8.If heterozygous tall test cross gives
   a) 100% tall (b)100% dwarf
   c) 50%tall & 50%dwarf (d)75% tall

9.Which one of the following characters is a homozygous character?
   a)TT b)Tt
   c)Both a and b d)None of the above

10.Mendel's theory of inheritance known as Particulate theory

a) Waves theory
b) Movement theory
c) Novel theory

Part – B

II.Very Short Answer.

1.Define genetics.

2. What is Test cross.

3. Write mendals law of independence assortment.

4. Define Incomplete dominance.

5.What are multiple alleles

Part – C

III. Short Answer.

1. Explain the law of dominance in monohybrid cross.

2. Describe law of independent assortment.

3. Give the role of genes in pea plant purple flower.

4.What is meant by Cytoplasmic Inheritance.

5. Bring out the inheritance of chloroplast gene with an example.

Part – D

IV.Write in detail.

1.Explain with an example how single genes affect multiple traits and alleles the
2.phenotype of an organism.Differentiate discontinuous and continuous variations.