

R.S.P.COLLEGE, JHARIA(Belagaria)
Department of Botany

Semester III Internal Examination, 2021

Paper: C-VII **Genetics** F.M.= 15

Section A

Choose the correct Answer

[15 x 1 = 15]

1. Under what conditions F₂ ratio of 9:7 is obtained

- (a) co-dominance
- (b) suppressor genes
- (c) duplicate genes
- (d) complementary genes

Answer: (d) complementary genes

2. The phenomenon in which an allele of one gene suppresses the activity of an allele of another gene is known as

- (a) inactivation
- (b) dominance
- (c) epistasis
- (d) suppression

Answer: (c) epistasis

3. Epistasis was discovered by

- (a) Shull
- (b) Johanssen

(c) Mendel

(d) Bateson

Answer: (a) Shull

4. . In case of incomplete dominance in F₂ generation

(a) genotype ratio 3 : 1

(b) phenotypic ratio is 3 : 1

(c) genotypic ratio = phenotypic ratio

(d) nothing can be concluded

Answer: (c) genotypic ratio = phenotypic ratio

5. A gene pair hides the effects of another gene. The phenomenon is called

(a) epistasis

(b) mutation

(c) dominant

(d) segregation

Answer: (a) epistasis

6. Pleiotropic effect is found in

(a) human skin colour

(b) night blindness

(c) haemophilia

(d) sickle cell anaemia

Answer: (d) sickle cell anaemia

7. The graphical representation to calculate the probability of all possible genotypes of offspring in a genetic cross is called

- (a) Pedigree analysis
- (b) Punnet square
- (c) Chromosome map
- (d) Genotypic ratio

Answer: (b) Punnet square

8. F₂ phenotypic ratio of 1: 2: 1 is obtained in

- (a) complete dominance
- (b) incomplete dominance
- (c) complete recessive
- (d) none of these

Answer: (b) incomplete dominance

9. colour of summer squash is an example of dominant epistasis.

- (a) Flower
- (b) Leaf
- (c) Fruit
- (d) None

Answer: (c) Fruit

10.. Name the phenomenon shown by *Mirabilis jalapa*

- (a) incomplete dominance
- (b) complete dominance
- (c) co-dominance
- (d) none of these

Answer: (a) incomplete dominance

11. Mendel took _____ contrasting characteristics of pea plants.

- (a) eight
- (b) seven
- (c) six
- (d) five

Answer: (b) seven

12. What does "genotype" refer to?

- (a) the chromosomes of an organism
- (b) the genetic make-up of an organism
- (c) the type of gene in question
- (d) the physical expression of genes

Answer: (d) the physical expression of genes

13. When two organisms are crossed, the offspring are referred to as

- (a) the F2 generation.
- (b) recessive.
- (c) the F1 generation.

(d) a genotype.

Answer: (c) the F1 generation.

14. The law which states that "Genes of different traits can segregate independently during the formation of gamete" is known as

- (a) law of independent assortment
- (b) law of segregation
- (c) law of dominance and uniformity
- (d) all of above

Answer: (a) law of independent assortment

15. The cross where the sources of gametes are reversed is called

- (a) reciprocal cross
- (b) reverse cross
- (c) dihybrid cross
- (d) test cross

Answer: (a) reciprocal cross