STD:12 EM BIOLOGY – TEST SERIES Max Mark :25

C2 – CLASSICAL GENETICS

I. CHOOSE THE CORRECT ANSWERS 5 x 1 =5

1. Select the period for Mendel's hybridization experiments
   a) 1856 - 1863 b) 1850 - 1870
   c) 1857 - 1869 d) 1870 - 1877
2. How many different kinds of gametes will be produced by a plant having the genotype AABbCC?
   a) Three b) Four
   c) Nine d) Two
3. "Gametes are never hybrid". This is a statement of
   a) Law of dominance b) Law of independent assortment
   c) Law of segregation d) Law of random fertilization
4. In a test cross involving F1 dihybrid flies, more parental type offspring were produced than the recombination type offspring. This indicates
   a) The two genes are located on two different chromosomes
   b) Chromosomes failed to separate during meiosis
   c) The two genes are linked and present on the some chromosome
   d) Both of the characters are controlled by more than one gene
5. The dominant epistatis ratio is
   a) 9 : 3 : 3 : 1 b) 12 : 3 : 1
   c) 9 : 3 : 4 d) 9 : 6 : 1

II VERY SHORT ANSWERS 3 x 2 = 6

6. Differentiate incomplete dominance and codominance.
7. What is meant by true breeding or pure breeding lines / strain?
8. What are multiple alleles?

III SHORT ANSWERS 3 x 3 = 9

9. What are the reasons for Mendel's successes in his breeding experiment?
10. Explain the law of dominance in monohybrid cross.
11. Name the seven contrasting traits of Mendel.

IV LONG ANSWERS 1 x 5 = 5

12. Explain with an example how single genes affect multiple traits and alleles the phenotype of an organism.

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