

Class : XIIth Date : Subject : BIOLOGY DPP No. : 1

Topic :- Principles Of Inheritance & Variation

- A condition characterized by not having an exact number of chromosomes in a multiple of haploid set is called

 a) Polyploidy
 b) Synploidy
 c) aneuploidy
 d) None of these
- 2. Choose correct option for *A*,*B*,*C* and *D*



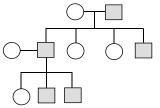


a) A-tt, B-TT, C-TT, D-TT c) A-TT, B-TT, C-Tt, D-TT b) A-Tt, B-Tt, C-Tt, D-Tt d) A-Tt, B-Tt, C-Tt, D-TT

- 3. When a cross is conducted between black feathered hen and a white feathered cock, blue feathered fowls are formed. When these fowls are allowed for interbreeding, in F₂- generation, there are 20 blue fowls. What would be the number of black and white fowls?
 a) Black 20, white 10 b) Black 20, white 20 c) Black 10, white 10 d) Black 10, white 20
- 4. Chromosomes are made up ofa) DNA are proteinb) RNA and DNA

c) DNA and histone d) Only histones

- 5. In pedigree analysis, the square, blackened and horizontal lines represents
 a) Female, healthy individual, parents
 b) Female, affected individual, parents
 c) Male, affected individual, parents
 d) Male, affected individual, progeny
- 6. Following pedigree chart shows



a) Character is carried by Y-chromosome

c) Character is sex-linked dominant

b) Character is sex-linked recessive

d) Character is recessive autosomal

- 7. Mr. Sidd is suffering from hypertrichosis and phenylketonuria. His father is heterozygous for phenylketonuria. The probability of Sidd's sperm having one recessive autosomal allele and holandric gene is
 - a) $\frac{1}{2}$ b) $\frac{1}{8}$ c) $\frac{1}{10}$ d) $\frac{1}{4}$
- 8. F₃-generation is obtained by
 a) Selfing of F₁
 b) Selfing of F₂
 c) Crossing of F₁ and F₂ d) None of these
- 9. In which one of the following, complementary gene interaction rato of 9 : 7 is observed?
 a) Fruit shape in Shepherd's purse
 b) Coat colour in mouse
 c) Feather colour in fowl
 d) Flower colour in pea
- 10. Starch synthesis gene in pea plant is the example of
 - a) Single gene produce more than one effects
 - b) Multiple genes produce more than one effects
 - c) Two genes produce more than one effects
 - d) Multiple genes produce less than one effects
- 11. In Drosophila, the sex is determined by
 - a) The ratio of pairs of X-chromosomes to the pairs of autosomes
 - b) Whether the egg is fertilized or develops parthenogenetically
 - c) The ratio of number of X-chromosomes to the set of autosomes
 - d) X and Y-chromosomes

12. The 1:2:1 ratio with the pink flower in the F_2 -generation indicate the phenomenon of

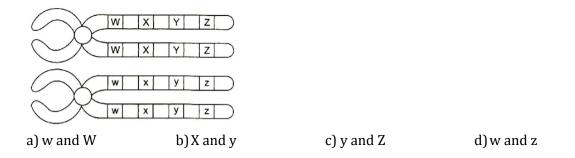
a) Dominance	b) Codominance
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c) Incomplete dominance d) Segregation

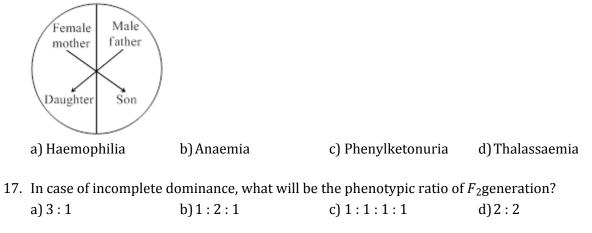
13. Sexual reproducation leads to	
a) Genetic recombination	b) Polyploidy
c) Aneuploidy	d) Euploidy

14. Husband has blood group-A and wife has blood group-B. What is the blood group of children?a) Ab) Bc) ABd) A, B, AB and O

15. Study the following figure and find out the most probable position at which the crossing over takes place



16. Given diagram shows certain type of traits in human. Which one of the following option could be an example of this pattern?



18. Haemophilia, a X-linked recessive disease is caused due to deficiency of

b) Blood platelets and haemoglobin
d) All of the above
b) Independent assortment
d) Purity of gametes
d b

c) 13th

d)19th

b)14th

a) 16th