DPP
DAILY PRACTICE PROBLEMS

Class : XIIth **Subject : BIOLOGY**
Date : **DPP No. : 8**

Topic :- Principles Of Inheritance & Variation

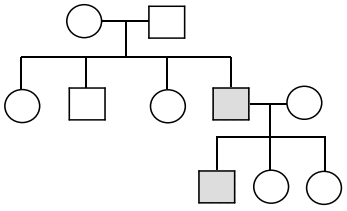
1. Cross between unrelated group of organisms, is called
   a) Hybridization b) Test cross c) Back cross d) Heterosis

2. If $AAbb \times aaBB$,then phenotypic ratio of its progeny will be
   a) 9 : 3 : 3 : 1 b) 1 : 2 : 1 c) 1 : 1 : 1 : 1 d) 4 : 1

3. I. Short statured with small round head
   II. Furrowed tongue and partially opened mouth
   III. Palm is broad with characteristic palm crease
   IV. Slow physical, psycomotor and mental development
   These are the characters of
   a) Down's syndrome b) Turner's syndrome
   c) Klinefelter's syndrome d) Edward syndrome

4. Which of the following statements are false?
   I. A Dominant allele determines the phenotype when paired with a recessive allele
   II. A recessive allele is weaker than a dominant allele
   III. A recessive allele do not shows its effects when paired with a dominant allele
   IV. A dominant allele is always better for an organism
   a) II, I and IV b) II, III and IV c) I, II and III d) I, III and IV

5. Following pedigree chart shows



   a) Recessive and autosomal
   b) Recessive and sex-linked
   c) Dominant and sex-linked
   d) Dominant and autosomal

6. Phenotype of an organism is the result of
   a) Mutations and linkages b) Cytoplasmic effects and nutrition

c) Environmental changes and sexual dimorphism
d) Genotype and environment interactions

7. Which of the following is not a hereditary disease?
a) Cretinism
b) Cystic fibrosis
c) Thalassemia
d) Haemophilia

8. F_1- progeny of a cross between pure tall and dwarf plant is always
a) Tall
b) Short
c) Intermediate
d) None of these

9. Gynaecomastia is a common feature seen in
a) Down's syndrome
b) Turner's syndrome
c) PKU
d) Klinefelter's syndrome

10. Dominant lethal gene is one which
a) Allows the organism to survive but not reproduce
b) Determines sex of offsprings
c) Allows the organism to survive and reproduce
d) Kills the organism

11. Total number of round seed in a cross between pure yellow round and pure green wrinkled seeds in F_2 is (out of total 16 resulted)
a) 9
b) 12
c) 11
d) 10

12. Linked gene is related to …A… and unlinked gene is related to …B…
Choose correct option for A and B
a) A-linkage; B-crossing over
b) A-crossing over; B-linkage
c) A-crossing over; B-recombination
d) A-recombination; B-crossing gene

13. The linkage map of X-chromosomes of fruit fly has 66 units, with yellow body gene (y) at one end and bobbed hair (b) gene at the other end. The recombination frequency between these two genes (y and b) should be
a) $\leq 50\%$
b) 100%
c) 66%
d) >50%

14. In man, which of the following genotypes and phenotypes may be the correct result of aneuploidy in sex chromosomes?
a) 22 pairs+XXY males
b) 22 pairs+XX females
c) 22 pairs+XXXY females
d) 22 pairs+X females

15. Experimental evidence of chromosomal theory of inheritance was given by
a) HT Morgan
b) TH Morgan
c) H de Vries
d) DH Vries

16. Theoretically in incomplete dominance one allele function as normal, while another allele may function as
a) Normal allele
b) Non-functional allele
c) Normal but less efficient allele
d) All of the above

17. In a family, man have blood group-A and women have blood group-B. Blood group of their children will be
    a) Only A b) A or B or AB or O c) Only O d) Only B

18. Principle or laws of inheritance were enunciated by
    a) Mendel b) Morgan c) Bateson d) Punnett

19. Mendel's law was explained by
    a) Meiosis b) Mitosis c) Both (a) and (b) d) None of these

20. Which statement about Mendel is true?
    a) His discoveries concerning genetic inheritance were generally accepted by scientific community at his time
    b) He discovered linkage
    c) He believed that genetic traits of parents will usually blend in their children
    d) His principles about genetics apply usually to plants and animals