

DPP

DAILY PRACTICE PROBLEMS

Class : XIIth

Date :

Subject : BIOLOGY

DPP No. : 7

Topic :- Principles Of Inheritance & Variation

1. $2n-2$ is known as
 - a) Monosomic
 - b) Trisomic
 - c) Nullisomy
 - d) Polyploidy

2. A man and a woman, who do not show any apparent sign of a certain inherited disease, have seven children (two daughter and five sons). Three of the sons suffer from the given disease but none of the daughters are affected. Which of the following mode of inheritance do you suggest for this disease?
 - a) Autosomal dominant
 - b) Sex -linked dominant
 - c) Sex -limited recessive
 - d) Sex -linked recessive

3. Colourblindness is caused due to
 - a) Recessive female chromosome
 - b) Dominant female chromosome
 - c) Dominant male chromosome
 - d) Linkage

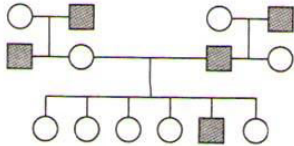
4. Which principle/law has been called the 2nd law of inheritance?
 - a) Law of independent assortment
 - b) Law of segregation
 - c) Law of dominance
 - d) Law of paired factor

5. Mendel's experiment were based on hybridization between two plants differing in
 - a) A pair of contrasting character
 - b) Three pairs of contrasting character
 - c) Many pairs of contrasting character
 - d) None of the above

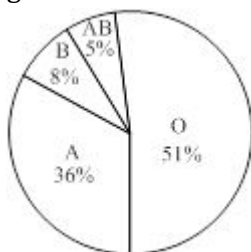
6. Alleles can be similar as in the case of ...A... like ...B... or can be dissimilar as in the case of ...C... like ...D... Choose the correct option for A,B,C and D
 - a) A-heterozygous, B-T T or T t, C-homozygous, D-T T
 - b) A-homozygous, B-T T or t t, C-heterozygous, D-T t
 - c) A- homozygous, B-T t, C- heterozygous, D-T T
 - d) A- homozygous, B-T t, C- heterozygous, D-t t

7. The Barr body is observed in
 - a) Basophils of male
 - b) Neutrophils of female
 - c) Basophils of female
 - d) Eosinophils

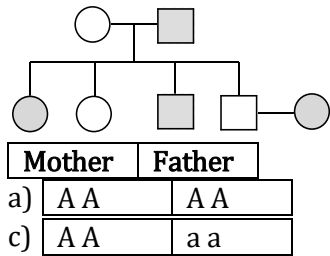
8. The phenotypic ratio of a monohybrid cross in F_2 -generation is
 a) 3 : 1 b) 1 : 2 : 1 c) 2 : 1 : 1 d) 9 : 3 : 3 : 1
9. Total number of wrinkled seed in previous question
 a) 4 b) 3 c) 2 d) 1
10. This pedigree is of a rare trait, in which children have extra fingers and toes. Which one of the following patterns of inheritance is consistent with this pedigree?



- a) Autosomal recessive b) Autosomal dominant
 c) Y-linkage d) Sex –linked recessive
11. If a colourblind woman marries a normal visioned man, their sons will be
 a) All normal visioned
 b) One half colourblind and one half normal
 c) Three-fourth colourblind and one-fourth normal
 d) All colourblind
12. Barr body is produced due to partial inactivation of one X-chromosome in female. This is called
 a) Dosage compensation b) Facultative heterochromatisation
 c) Both (a) and (b) d) None of the above
13. Percentage of blood groups in India is given in the diagram below. Choose the correct option from the given statements



- a) Only 10% of individuals are heterozygous for blood group alleles
 b) Group A is the most common as it is the homozygous recessive group
 c) The alleles for blood group A and O are dominant to the allele for blood group O
 d) Any individual, selected at random from the sample population, has a 1 in 20 chance of being blood group AB
14. find out the genotype of father and mother is the given pedigree chart



b)	Aa	Aa
d)	aa	Aa

15. Analysis of traits of several generation of a family in the form of diagram is called
- Gene analysis
 - Chromosome analysis
 - Allele analysis
 - Pedigree analysis
16. Among the following which one is the mutagenic agent?
- Visible light
 - Penicillin
 - Formalin
 - Water vapour
17. Frameshift mutation and base pair substitution changes the
- Nucleotide structure
 - Nucleotide sequence
 - Nucleoside sequence
 - Sugar phosphate sequence
18. A women with blood-O has a child with blood group-O. She claims that a man with blood group-A is the father of her child. What would be the genotype of the father, if her claim is right?
- $I^O I^O$
 - $I^A I^B$
 - $I^A I^O$
 - $I^B I^O$
19. The terminal end of chromosomes is called
- Centromere
 - Telomere
 - Chromomere
 - Metamere
20. Mendel conducted experiments for
- 7 years
 - 6 years
 - 5 years
 - 4 years