

DPP

DAILY PRACTICE PROBLEMS

Class : XIIth

Date :

Subject : BIOLOGY

DPP No. : 3

Topic :- Principles Of Inheritance & Variation

- The proportion of plants that were dwarf and tall in F_2 - generation of Mendel experiment
 - $\frac{1}{4}$ th and $\frac{3}{4}$ th
 - $\frac{3}{4}$ th and $\frac{1}{4}$ th
 - $\frac{2}{3}$ rd and $\frac{1}{3}$ rd
 - $\frac{1}{3}$ rd and $\frac{4}{3}$ rd
- Night blindness is
 - Genetic disease
 - Nutritional deficiency disease
 - Generally found in male
 - Generally found in female
- Two genes R and Y are located very close on the chromosomal linkage map of maize plant. When RRYy and rryy genotypes are hybridized, then F_2 -segregation will show
 - 1 : 2 : 1
 - 3 : 1
 - 9 : 3 : 3 : 1
 - 1 : 1 : 1
- Who argued that pairing and separation of chromosomes would lead to the segregation of a pair of factor they carried?
 - Sutton
 - Boveri
 - Both (a) and (b)
 - Morgan
- Sex chromosomes of male are
 - Homozygous
 - Heterozygous
 - Hemizygous
 - Autosomes
- Trisomy of which chromosome is involved in Down's syndrome?
 - 15th
 - 21st
 - 20th
 - 19th
- Which of the following symbols are used for representing chromosome of birds?
 - ZZ-ZW
 - XX-XY
 - XO-XX
 - ZZ-WW
- Sudden and heritable change in a character of an organism is called
 - Mutation
 - Heterosis
 - Inbreeding
 - Selection
- Heterozygous purple flower is crossed with recessive white flower. The progeny has the ratio
 - All purple
 - All white
 - 50% purple, 50% white
 - 75% purple, 25% white
- The Mendel crossed true breeding tall and dwarf plant varieties in his experiment. The tall character was dominant and recessive character was dwarf. The recessive character was appeared in
 - F_1
 - F_2
 - F_3
 - F_2 and F_3

11. Night blindness can be corrected by giving vitamin- ...A... but colour blindness can't be cured because it is ...B... disease.
Choose the correct option for A and B
a) A-A; B-genetic b) A-B; B-autosomal c) A-C; B-non-genetic d) A-D; B-genetic
12. Heredity is
a) Transmission of characters b) Mixing of characters
c) Blending of inheritance d) Deleting of characters
13. Which of these statements about Huntington's disease is true?
a) Genetic tests to detect the presence of the allele responsible for Huntington's disease do not exist at this time
b) The onset of Huntington's disease is typically between birth and three years of age
c) There is currently no effective treatment of Huntington's disease
d) Huntington's disease is caused by the expression of a recessive allele
14. Centromere is required for
a) Transcription b) Crossing over
c) Cytoplasmic cleavage d) Movement of chromosomes towards poles
15. Which of the following condition in humans is correctly matched with its chromosomal abnormality/linkage?
a) Klinefelter's syndrome -44 autosomes + XXY b) Colour blindness -Y- linked
c) Erythroblastosis foetalis -X- linked d) Down's syndrome - 44 autosomes+ XO
16. Rrrr progeny : Red (dominant) flowered heterozygous crossed with white flower
a) 350 → red : 350 → white b) 450 → red : 250 → white
c) 380 → red : 250 → white d) None of these
17. A hereditary disease which is never passed on from father to son is
a) X- chromosomal linked disease b) Autosomal linked disease
c) Y- chromosomal linked disease d) None of the above
18. A man with blood group-B marries a woman with blood-A and their first child is having blood group-B. What is the genotype of child?
a) $I^a I^b$ b) $I^a I^o$ c) $I^b I^o$ d) $I^b I^b$
19. Linked gene are present on
a) Same chromosome b) Different chromosome
c) Heterologous chromosome d) Paired chromosome

20. The structure that become double in synthesis phase of cell division is/are
- a) RNA
 - b) Centriole
 - c) DNA
 - d) None of these

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