

Botany

Chapterwise Practise Problems (CPP) for NEET

Chapter - Principles of Inheritance and Variation

1. Find the **incorrect** match w.r.t pea plant

	Character	Trait(Dominant)	Trait (recessive)
1	Stem height	Tall	Dwarf
2	Flower position	Terminal	Axial
3	Flower colour	Purple	White
4	Pod shape	Inflated	Constricted

2. In F_2 Mendelian population of 100 pea plants, how many are expected to be pure tall?

- (1) 100 (2) 75
 (3) 50 (4) 25

3. From the following postulation of Mendel, which one expresses the 2nd law of Mendel?

- (1) Each character is controlled by a discrete unit called factor
 (2) Factors occur in pairs
 (3) In a dissimilar pair, only dominant factor is expressed
 (4) Two factors for a character are not mixed up. Both are recovered in F_2 -population after segregation

4. Which of the following is/are possible for a modified allele?

- (i) Can produce no enzyme
 (ii) Can produce a non functional enzyme
 (iii) Can produce an altered and functional product
 (1) Only (i) (2) Only (i) & (iii)
 (3) Only (ii) (4) All (i), (ii) & (iii)

5. A purple flowered (CcPp) and a white flowered (CCpp) sweet pea plants (*Lathyrus odoratus*) are crossed. Find the ratio of purple : white flowered plants formed in F_1 generation

- (1) 3 : 1 (2) 1 : 1
 (3) 2 : 1 (4) 1 : 3

6. Consider the following cross $AaBb \times AaBb$. What are the chance of occurrence of a progeny with Aabb genotype

- (1) $\frac{1}{4}$ (2) $\frac{1}{8}$
 (3) $\frac{1}{16}$ (4) $\frac{1}{32}$

7. Which of the following related to genetics is universally applicable ?

- (1) Law of dominance
 (2) Law of segregation
 (3) Law of independent assortment
 (4) Law of incomplete dominance

8. In ZW-ZZ type of sex determination

- (1) Female is homogametic
 (2) Male is heterogametic
 (3) Female is heterogametic
 (4) Male is either homogametic or heterogametic

9. Seven different characters selected by Mendel was located on how many chromosome?

- (1) 7 (2) 4
 (3) 2 (4) 1

10. In which of the following organisms, father can **not** transmit traits to his son?

- (1) Cock (2) Grass hopper
 (3) Honey bee (4) Butterfly

11. ____ (i) ____ and ____ (ii) ____ are ____ (iii) ____ traits.

Select the option which would be **correct** for blanks (i), (ii) and (iii) respectively

- (1) Beard, short index finger and sex limited
 (2) Beard, deep male voice and sex limited
 (3) Pattern of baldness, short index finger and holandric
 (4) Beard, deep male voice and sex influenced

12. Sickle cell anaemia is an example of

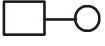
- (1) Polygenic trait (2) Pleiotropic trait
 (3) Qualitative trait (4) Both (2) and (3)

13. Which characters were **not** chosen by Mendel in his pea plant experiment?

- (1) Height of plant and flower position
 (2) Seed shape and seed colour
 (3) Flower shape and cotyledon colour
 (4) Pod shape and pod colour

14. How many pea plants will be dwarf in a mendelian dihybrid cross for height and flower colour in F_2 population?
 - (1) 100% (2) 75%
 - (3) 50% (4) 25%
15. In a cross of two pink flowered plants of Snapdragon, what would be the probability of red flowered plants in F_1 generation?
 - (1) $\frac{4}{4}$ (2) $\frac{3}{4}$
 - (3) $\frac{2}{4}$ (4) $\frac{1}{4}$
16. Genes for are linked which two characters selected by Mendel in garden pea?
 - (1) Height of plant and seed colour
 - (2) Flower colour and pod shape
 - (3) Height of plant and pod shape
 - (4) Height of plant and seed shape genes
17. Find the **odd** one out with respect to sex limited traits
 - (1) Antlers in male deer
 - (2) Brilliant plumage of peacock
 - (3) Short index finger in male
 - (4) Beard in man
18. In which of the following cases all daughters will be carrier but sons normal ?
 - (1) Colourblind mother $\times$ Colourblind father
 - (2) Colourblind mother $\times$ Normal father
 - (3) Carrier mother $\times$ Normal father
 - (4) Normal mother $\times$ Colourblind father
19. Find the **odd** one out with respect to Mendelian disorders in human being.
 - (1) Sickle cell anaemia (2) Phenylketonuria
 - (3) Turner's syndrome (4) Thalassemia
20. The codon in antisense strand of DNA responsible for β -chain of hemoglobin, that results in the synthesis of Hb^s peptide is
 - (1) GAG (2) CTC
 - (3) GTG (4) CAC
21. Which one is **not** a recessive human trait?
 - (1) Myotonic dystrophy (2) Cystic fibrosis
 - (3) Phenylketonuria (4) Thalassemia
22. Mendel selected pea plant for his experiment for the following features, **except**:
 - (1) Pea plant has many contrasting characters
 - (2) Blending of traits occur in pea
 - (3) Large number of seeds are obtained in one season
 - (4) Pea plant is self pollinated and is true breeding
23. Which is **incorrect** about Mendel's success?
 - (1) He applied biostatistics to get quick result
 - (2) He was a good record keeper
 - (3) He got the same result in hawk weed as in pea
 - (4) He studied a large sample size of pea plants
24. In a Mendelian dihybrid cross for seed shape and seed colour, F_2 population has 256 plants. How many plants are heterozygotes for both the traits?
 - (1) 128 (2) 64
 - (3) 32 (4) 16
25. Read the statements carefully and choose the correct option
 - (A) In recessive epistasis the ratio is 12 : 3 : 1
 - (B) In this case the epistatic gene is dominant allele
 - (1) Both are correct and B is correct explanation of A
 - (2) Both are correct
 - (3) Only A is correct
 - (4) Both are incorrect
26. Calculate the total number of genotypes and phenotypes produced in F_2 generation of a polygenic inheritance involving 3 pairs of alleles
 - (1) 44 (2) 34
 - (3) 24 (4) 14
27. One of the reasons for which *Drosophila* was selected by T.H. Morgan for his experiment is that?
 - (1) Single mating produces few offsprings
 - (2) Many X-linked characters are found in *Drosophila*
 - (3) Male and females cannot be distinguished by morphology
 - (4) It has many hereditary variations which cannot be seen through a low power microscope.
28. What is the skin colour of a human being with the genotype AAbbCc?
 - (1) Fairly dark (2) Mulatto
 - (3) Darly (4) Very light
29. Female heterogamety is seen in
 - (1) Grasshopper
 - (2) *Drosophila*
 - (3) Birds
 - (4) Human

30. Find the order of genes A, B, C and D on *E.coli* genophore if the distance between A and D is 33 map units, C and D is 13 map unit A and B is 42 map units, B and D is 9 map unit and A and C is 20 map units
- (1) A — B — C — D (2) A — C — B — D
(3) A — C — D — B (4) A — D — B — C
31. In the Mendelian dihybrid cross for the colour and shape of seed, what is the probability of plants having homozygous round seed character ?
- (1) $\frac{3}{4}$ (2) $\frac{9}{16}$
(3) $\frac{3}{8}$ (4) $\frac{1}{4}$
32. In which of the following cases maximum types of gametes are possible?
- (1) AABB (2) AABb
(3) aaBb (4) AaBb
33. Find the **odd** one out from the given list with respect to human traits.
- (1) Fused ear lobe
(2) Sickle cell anaemia
(3) Widow's peak
(4) Lesch-Nyhan syndrome
34. Number of Barr body present in an individual having Turner's syndrome is
- (1) 0 (2) 1
(3) 2 (4) 3
35. A condition where an individual heterozygous for two pairs of linked genes (TtRr) possesses the two dominant genes on one homologous chromosome pair and two recessive on the other, it is said to be—
- (1) Cis — arrangement
(2) Trans - arrangement
(3) Partially cis partially trans
(4) More than one option is correct
36. What is the recombination percentage between gene w (white eye) and m (miniature wing) in *Drosophila* in the experiment conducted by Morgan?
- (1) 1.3% (2) 98.7%
(3) 62.8% (4) 37.2%
37. Human male has _____ linkage group more than human female
- (1) 24 (2) 23
(3) 1 (4) 0
38. Sickle cell anaemia is due to
- (1) Insertion repeats
(2) Transversion substitution mutation
(3) Transition substitution mutation
(4) Chromosomal shift translocation
39. Read the following statements and choose **correct** option
- (A) A gamete carries only one factor of a character
(B) Starch synthesis in wrinkled seeded pea plants is most efficient
(C) Modified allele is always the recessive allele
- (1) All are incorrect except A
(2) All are correct except B
(3) All are incorrect
(4) All are correct
40. Who prepared first genetic map for *Drosophila*?
- (1) Sturtevant (2) Bateson
(3) Bridges (4) Muller
41. Initial experiments about genetic/chromosomal mechanism of sex determination were carried out in
- (1) Insects (2) Pea
(3) *Bombina* (4) *E. coli*
42. Select **odd** one with respect to Mendelian disorder
- (1) Down's syndrome (2) Haemophilia
(3) Colour blindness (4) Sickle-cell anaemia
43. How many types of gametes will be produced from AaBBCcdd ?
- (1) 6 (2) 8
(3) 4 (4) 9
44. A normal man married a normal woman, both of whom have colour-blind father. What percentage of their daughter would be colour-blind?
- (1) 0% (2) 25%
(3) 50% (4) 75%
45. Consider the following cross
- ♂ AABbCcDDEe × AaBbCCDdee ♀
- What will be the proportion of offsprings having genotype AAbbCCDDEe ?
- (1) $\frac{1}{128}$ (2) $\frac{1}{32}$
(3) $\frac{1}{64}$ (4) $\frac{1}{16}$

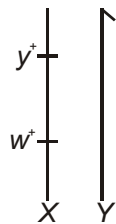
46. Inheritance of skin colour in humans is an example of
- Genomatic mutation
 - Polygenic inheritance
 - Co-dominance
 - Complementary genes
47. Lack of independent assortment of two genes A and B in fruit fly *Drosophila* is due to
- Repulsion
 - Recombination
 - Linkage
 - Crossing over
48. In pedigree analysis, symbol given for sex unspecified is
- 
 - 
 - 
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49. Presence of more than two alleles for a gene in a population is called
- Polygene
 - Pleiotropy
 - Multiple allele
 - Co-dominance
50. Calculate the total number of genotypes in F_2 generation if a character is controlled by 2 pairs of polygenes.
- 4
 - 6
 - 8
 - 9
51. In an F_2 population of 96 plants produced from a Mendelian cross of RYY and ryy (wrinkled-green) how many plants will be homozygous for round-green seeds ?
- 24
 - 8
 - 6
 - 16
52. In a cross between yellow body, white eyed female and the wild type brown body, red eyed male, Morgan obtained
- 1.3% parental type and 98.7% recombinant type in F_2 generation
 - 98.7% parental type and 1.3% recombinant type in F_2 generation
 - 62.8% parental type and 37.2% recombinant type in F_2 generation
 - 37.2% parental type and 62.8% recombinant type in F_2 generation
53. Phenylketonuria is caused a/an due to
- Autosomal recessive gene
 - Autosomal dominant gene
 - X linked recessive gene
 - Holandric gene
54. According to genic balance theory by C.B. Bridges, in *Drosophila*, the $\frac{X}{A}$ ratio being 1.5 in the organism, the organism will be a
- Normal female
 - Normal Male
 - Superfemale
 - Intersex
55. Fill in the blanks and choose **correct** option.
- In [A] inheritance, the dominant alleles of the genes show cumulative effect.
 - First linkage map was developed in [B].
 - Chromosome [C] is called Philadelphia chromosome.
- A – Polygenic, B – *Neurospora*, C – 9
 - A – Qualitative, B – *Pisum*, C – 5
 - A – Quantitative, B – *Drosophila*, C – 22
 - A – Monogenic, B – *Lathyrus*, C – 21
56. Find the **correct** match
- Porcupine skin – Sex influenced trait
 - Beard in man – Holandric trait
 - Deep male voice – Sex limited trait
 - Sickle cell anaemia – X linked
57. Genomatic mutation is
- Change in number of chromosomes
 - Change in morphology of chromosomes
 - Replacement of one base by another
 - Removal of one or more bases from nucleotide chain
58. Which combination in *Drosophila* develops into Inter sex ?
- AA + XXX
 - AAA + XXY
 - AAA + XY
 - AA + XX
59. What are the chances of occurrence of three consecutive male child to a couple ?
- $\frac{1}{8}$
 - $\frac{1}{2}$
 - $\frac{3}{8}$
 - $\frac{1}{3}$
60. **A** : Loosely linked genes show high recombination than completely linked.
B : Test cross is the tool for knowing genotype of test organism.
- Both the statements are true
 - Both the statements are false
 - Only statement A is true
 - Only statement B is true

61. The linkage group(s) of a human sperm and egg is
 (1) 23 each
 (2) 24 and 23 respectively
 (3) 23 and 24 respectively
 (4) 22 and 23 respectively

62. A diploid organism is heterozygous for five loci and homozygous for two loci, how many types of gametes are possible ?

- (1) 14 (2) 16
 (3) 32 (4) 64

63. How many types of gametes will be produced by a male *Drosophila* having following arrangement of two genes (y^+ and w^+) on X-chromosome?



- (1) Two (2) Four
 (3) One (4) Eight

64. Person suffering from christmas disease lack

- (1) Plasma thromboplastin
 (2) Antihemophilic globulin
 (3) Phenylalanine hydroxylase
 (4) Tyrosinase

65. Which one of the following Mendelian traits can be expressed in the presence of its identical allele only?

- (1) Green pod (2) Axial flower
 (3) Constricted pod (4) Round seed

66. A couple heterozygous for sickle cell anaemia expects a baby. What are the chances of their having a completely normal baby ?

- (1) 75% (2) 50%
 (3) 65% (4) 25%

67. Autosomal trisomy can be seen in

- (1) Down's syndrome (2) Turner's syndrome
 (3) Patau syndrome (4) Both (1) and (3)

68. Which of the following is a sex limited trait ?

- (1) Antlers in male deer (2) Pattern baldness
 (3) Porcupine skin (4) Hypertrichosis

69. The total number of pure lines prepared by Mendel for his hybridization experiment in *Pisum sativum* was

- (1) 14 (2) 2
 (3) 7 (4) 34

70. In case of recessive epistasis, the phenotype ratio in F_2 generation is

- (1) 9:3:3:1 (2) 9:3:4
 (3) 9:6:1 (4) 9:7

71. Morgan conducted a cross between white eye, miniature winged female with the wild type red eye and normal winged male and obtained which of the following result in F_2 generation ?

- (1) 62.8% parental type and 37.2% recombinant type
 (2) 37.2% parental type and 62.8% recombinant type
 (3) 98.7% parental type and 1.3% recombinant type
 (4) 1.3% parental type and 98.7% recombinant type

72. Which of the following can express themselves in both F_1 and F_2 generations if, for the given characters, male and female parents are homozygous dominant and recessive respectively and F_1 is self crossed ?

- (1) Terminal flowers (2) Green seeds
 (3) Violet flowers (4) Wrinkled seeds

73. In Snapdragon, a pink flowered plant is test crossed. What is the phenotypical probability in the progeny ?

- (1) 1 Red : 2 Pink : 1 White
 (2) 1 Red : 2 Pink
 (3) 1 Pink : 1 White
 (4) 3 Red : 1 Pink

74. A man with blood group A (heterozygous) marries a woman with blood group A whose father had blood group O. Their first child had blood group O. What would be the probability of different possible blood groups in the next child ?

- (1) $\frac{1}{2}$ for blood group A and $\frac{1}{2}$ for blood group O
 (2) $\frac{1}{4}$ for blood group A and $\frac{1}{4}$ for blood group O
 (3) $\frac{3}{4}$ for blood group A and $\frac{1}{4}$ for blood group O
 (4) $\frac{1}{4}$ for blood group AB and $\frac{1}{2}$ for blood group A

75. A sweet pea plant with heterozygous genotype AaBb is test crossed. If the two genes interact in complementary manner, what would be the phenotype segregation w.r.t flower colour ?

- (1) 3 Purple : 1 White (2) 1 Purple : 3 White
 (3) 1 Purple : 1 White (4) 9 Purple : 7 White

76. Male heterogamety is observed in
- (1) Bird
 - (2) Grasshopper
 - (3) Butterfly
 - (4) Both (1) and (3)

77. In maize plant coloured grain is dominant over colourless and full grain is dominant over shrunken grain. A heterozygote for coloured and full grain was test crossed and following results were obtained

- (A) Coloured and Full = 205
- (B) Coloured and Shrunken = 16
- (C) Colourless and Full = 14
- (D) Colourless and Shrunken = 200

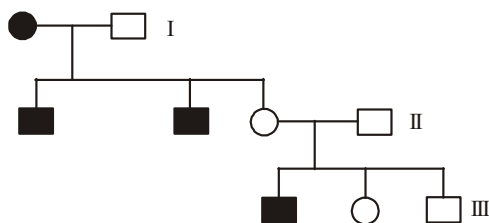
If the two genes responsible for colour and shape are linked then, determine the distance between these linked genes

- (1) 12.6 cM
- (2) 16.9 cM
- (3) 6.9 cM
- (4) 7.4 cM

78. Porcupine skin in Human is a/an

- (1) X linked recessive trait
- (2) X linked dominant trait
- (3) Y linked trait
- (4) Autosomal recessive trait

79. What does the given pedigree chart show ?



- (1) X-linked recessive trait
- (2) X-linked dominant trait
- (3) Autosomal dominant trait
- (4) Y-linked trait

80. Find the **correct** match.

- (1) Co-dominance – Flower colour in snapdragon
- (2) Pleiotropy – Phenylketonuria
- (3) Incomplete dominance – ABO blood grouping in humans
- (4) Dominant epistasis – Flower colour in sweet pea

81. Read the following statements and choose the **correct** option

- (a) Klinefelter's Syndrome occurs due to euploidy

- (b) Chromosomal aberrations are commonly observed in cancer cells
- (c) Deletions and insertions of base pairs of DNA causes frame-shift mutations
- (d) Chronic myelogenous leukemia occurs due to duplication of genes on a chromosome

- (1) (a) and (c) are incorrect
- (2) All except (d) are correct
- (3) (b) and (c) are correct
- (4) All except (b) are incorrect

82. The F_2 generation offspring in a plant showing incomplete dominance exhibit

- (1) Always a phenotypic ratio of 3 : 1
- (2) Always a genotypic ratio of 1 : 1
- (3) Variable genotypic and phenotypic ratios
- (4) Same genotypic and phenotypic ratios

83. Consider the cross $Aa Bb Cc Dd Ee \times aa Bb cc DD ee$.

What proportion of the progenies will genotypically resemble the first parent ?

- (1) $\frac{1}{64}$
- (2) $\frac{1}{32}$
- (3) $\frac{1}{16}$
- (4) $\frac{1}{4}$

84. Fill up the blanks and choose the **correct** option

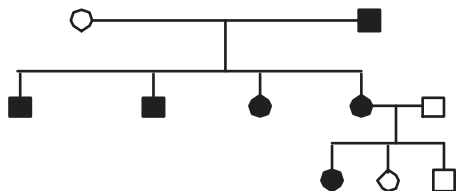
- (i) Skin colour inheritance in man is an example of [A] inheritance.
- (ii) A cross used to ascertain whether a dominant phenotype is homozygous or heterozygous is termed [B].
- (iii) In [C] inheritance, maternal influence is more among the offsprings.

- (1) A – Quantitative
- (2) A – Monogenic
- B – Reciprocal cross
- B – Out Cross
- C – Autosomal
- C – Extranuclear
- (3) A – Polygenic
- (4) A – Qualitative
- B – Test Cross
- B – Monohybrid Cross
- C – Cytoplasmic
- C – Sex linked

85. A colour blind daughter is born when her

- (1) Mother is colour blind and father is normal
- (2) Mother is carrier and father is colour blind
- (3) Mother does not carry any gene for colour blindness but father is colour blind
- (4) Mother is carrier and father is normal

86. The number of linkage groups in human egg is
 (1) 24 (2) 23
 (3) 22 (4) 46
87. All of the following are true for sickle cell anemia, **except**
 (1) Autosomal recessive
 (2) Diseased individual die before attaining maturity
 (3) Multiple allelism
 (4) Transversion mutation
88. Chromosomal theory of inheritance
 (i) Was proposed independently by Sutton and Boveri
 (ii) Shows parallelism between behaviour of chromosomes and behaviour of genes
 (iii) Was experimentally verified by T.H. Morgan
- The **correct** ones are
 (1) (i) & (ii) only (2) (i) & (iii) only
 (3) (ii) & (iii) only (4) All (i), (ii) & (iii)
89. Select the **odd** one with respect to inter allelic or intragenic interaction
 (1) Epistasis
 (2) Co-dominance
 (3) Pleiotropy
 (4) Incomplete dominance
90. In the following pedigree chart, the trait is



- (1) Haemophilia (2) Porcupine skin
 (3) Colourblindness (4) Myotonic dystrophy
91. Read the following statements and select whether **True (T)** or **False (F)**
 (A) In grasshopper, male individual is heterogametic
 (B) Short index finger in male is a holandric trait
 (C) Mutation is the only phenomenon that leads to variation in offsprings

	A	B	C
(1)	T	T	F
(2)	T	F	F
(3)	T	F	T
(4)	F	T	T

92. How many of the following are chromosomal disorders and Mendelian disorders respectively ?

Colour blindness, Sickle cell anaemia, Down's syndrome, Thalassaemia, Turner's Syndrome, Haemophilia, Phenylketonuria

- (1) 3 and 4 (2) 4 and 3
 (3) 2 and 5 (4) 1 and 6
93. Match the following columns
- | Columns - I | Columns - II |
|--|-------------------------|
| (i) Chromosomal map | (a) Bateson and Punnett |
| (ii) X-body | (b) A.H. Sturtevant |
| (iii) Complementary genes | (c) Sutton and Boveri |
| (iv) Chromosomal theory of inheritance | (d) Hanking |
- (1) (i) – (c), (ii) – (d), (iii) – (a), (iv) – (b)
 (2) (i) – (b), (ii) – (d), (iii) – (a), (iv) – (c)
 (3) (i) – (b), (ii) – (a), (iii) – (d), (iv) – (c)
 (4) (i) – (c), (ii) – (a), (iii) – (d), (iv) – (b)
94. In Co-dominance
 (A) F_1 generation resembles both parents
 (B) Genotypic and phenotypic ratios are always different
 (C) There is no mixing of the effect of both the alleles
 (1) Only (A) is correct
 (2) Only (C) is correct
 (3) Both (A) and (C) are correct
 (4) All are correct
95. In pea plant, a heterozygote for axial flower was outcrossed. In what ratio genotype would segregate ?
 (1) 3 : 1 (2) 1 : 1
 (3) 100% parental trait (4) 1 : 2
96. Pair of alleles segregate because
 (1) Bivalents separate during anaphase I
 (2) Genes recombine during pachytene
 (3) DNA replicates during S-phase
 (4) Chromatids separate during mitotic anaphase
97. If a cross is made between two individuals with genotype $Aabb \times aaBb$. What would be the probability of individuals with genotype $AaBb$?
 (1) $\frac{1}{2}$ (2) $\frac{1}{4}$
 (3) $\frac{1}{8}$ (4) $\frac{3}{4}$

98. If two linked genes are 50 map unit apart, what does it reveal w.r.t. frequency of gene recombination ?

- (1) it is equal to 50% (2) it is less than 50%
(3) it is above 50% (4) both (1) and (3)

99. Which type of gametic fusion would give rise to Klinefelter's syndrome ?

- (1) $(A+XX) \text{♀} \times (A+Y) \text{♂}$ (2) $(A+X) \text{♀} \times (A+Y) \text{♂}$
(3) $(A+XY) \text{♀} \times (A+X) \text{♂}$ (4) $(A+X) \text{♀} \times (A+XX) \text{♂}$

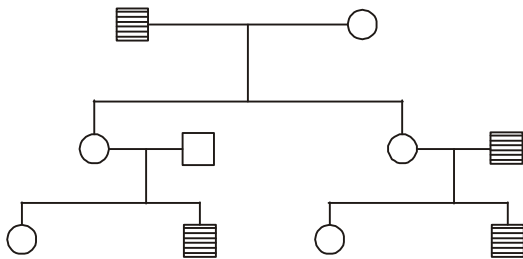
100. Which mutagen was used by Muller to induce point mutation in *Drosophila* ?

- (1) X-rays (2) Mustard gas
(3) HNO_2 (4) UV radiation

101. Find out the types of gametes that can be formed from the genotype $AaBBccDD$?

- (1) 4 (2) 8
(3) 12 (4) 16

102. The given pedigree does not represent inheritance of _____ disease



- (1) Colour blindness (2) Thalassemia
(3) Hypertrichosis (4) Haemophilia

103. Which of the following is a recombinant type of progeny obtained by Morgan while carrying out dihybrid cross?

- (1) $\frac{y}{y} \frac{w+}{w}$ (2) $\frac{y+}{y} \frac{w+}{w}$
(3) $\frac{y+}{y} \frac{w+}{w}$ (4) $\frac{y}{y} \frac{w}{w}$

104. Read the given statements and choose **correct** option

- (A) Turner's syndrome is caused due to the absence of one of the X-chromosome in human female i.e $44+XO$
(B) Down's syndrome is caused due to the trisomic of one of the X-chromosome in human male
(C) Hypertrichosis is sex-limited trait
(D) Haemophilia show lethality in human female
(1) All are correct except (B)
(2) Only (A) and (D) are correct
(3) All are correct except (C)
(4) All are correct

105. Substitution of thymine with guanine is called _____

- (1) Translocation (2) Transition
(3) Transversion (4) Inversion

106. Which of the following statement for butterflies is **incorrect** ?

- (1) Male individual is heterogametic
(2) Egg decides sex of progenies
(3) Similar number of autosomes are found in male and female individuals both
(4) Female individual is heterogametic



ANSWERS

- | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|
| 1. (2) | 2. (4) | 3. (4) | 4. (4) | 5. (2) | 6. (2) | 7. (2) |
| 8. (3) | 9. (2) | 10. (3) | 11. (2) | 12. (4) | 13. (3) | 14. (4) |
| 15. (4) | 16. (3) | 17. (3) | 18. (4) | 19. (3) | 20. (4) | 21. (1) |
| 22. (2) | 23. (3) | 24. (2) | 25. (4) | 26. (2) | 27. (2) | 28. (2) |
| 29. (3) | 30. (3) | 31. (4) | 32. (4) | 33. (3) | 34. (1) | 35. (1) |
| 36. (4) | 37. (3) | 38. (2) | 39. (1) | 40. (1) | 41. (1) | 42. (1) |
| 43. (3) | 44. (1) | 45. (3) | 46. (2) | 47. (3) | 48. (2) | 49. (3) |
| 50. (4) | 51. (3) | 52. (2) | 53. (1) | 54. (3) | 55. (3) | 56. (3) |
| 57. (1) | 58. (2) | 59. (1) | 60. (2) | 61. (1) | 62. (3) | 63. (1) |
| 64. (1) | 65. (3) | 66. (4) | 67. (4) | 68. (1) | 69. (1) | 70. (2) |
| 71. (1) | 72. (3) | 73. (3) | 74. (3) | 75. (2) | 76. (2) | 77. (3) |
| 78. (3) | 79. (1) | 80. (2) | 81. (3) | 82. (4) | 83. (2) | 84. (3) |
| 85. (2) | 86. (2) | 87. (3) | 88. (4) | 89. (1) | 90. (4) | 91. (2) |
| 92. (3) | 93. (2) | 94. (3) | 95. (2) | 96. (1) | 97. (2) | 98. (1) |
| 99. (1) | 100. (1) | 101. (1) | 102. (3) | 103. (1) | 104. (2) | 105. (3) |
| 106. (1) | | | | | | |