BIOLOGY

BOOKS - MBD BIOLOGY (ODIA ENGLISH)

HEREDITY AND VARIATION

Question Bank

1. A pure tall and a pure dwarf plant were crossed to produced offsprings . Offsprings

were self crossed then find out the ratio between true breeding tall to true breeding dwarf ?

A. 1:1

B. 3:1

C. 2:1

D. 1:2:1

Answer: A

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2. Genetics tern was proposed by

A. Mendel

B. Bateson

C. Morgan

D. Johannson

Answer: B

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3. Mother homozygous B,and father is A. What will be the possible blood group in their progeny ?

A. AB & B possible

B. AB & A possible

C. A and B possible

D. O possible

Answer: A

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4. In ABO blood groups, how many phenotypes are found ?

A. 6

B. 8

C. 1

D. 4

Answer: D

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5. When a tall plant with round seeds (TTRR) crossed with a dwarf plant with wrinkled seeds (ttrr) , the F_1 generation consists of tall plant with round seeds . What would be the proportion of dwarf plant with wrinkled seeds in F_1 -generation ?

A. $\frac{1}{4}$

B. $\frac{1}{16}$

C. 0

D. $\frac{1}{2}$

Answer: C

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6. In man , the blue eye colour is recessive to the brown eye colour . If the boy has brown eye and his mother is blue eyed, what would be the phenotype of his father ?

A. Black eye

B. Brown eye

C. Green eye

D. Blue eye

Answer: B

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7. A common test to find the genotype of a hybrid is by:

A. Crossing of one F_2 progeny with female parent

B. Studying the sexual behaviour of F_1 progenies

C. Crossing of one F_1 progeny with male parent

D. Crossimg of one F_2progeny with male parent

Answer: C

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8. Inheritances of skin colour in human is an example of:

A. Point mutation

B. Polygenic inheritance

C. Co- dominance

D. Chromosomal aberration .

Answer: B

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9. In pea plants , yellow seeds are dominant to green . If a heterozygous yellow seeded plant is crossed with a green seeded plant , what ratio of yellow and green seeded plants would you expect in F_1 - generation ?

A. 50:50

B. 9:1

C. 1:3

D. 3:1

Answer: D

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10. The offsprings of mating between two pure strains are called as:

A. heterosis

B. hybrid

C. progeny

D. cybird

Answer: B

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11. G.Mendal used the plant:

A. Oenothera lamarkiana

B. Lathyrus sativus

C. Mirabilis jalapa

D. Pisum sativum

Answer: D

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12. Organism with two different allele is:

A. heterozygous and homozygous

B. heterozygous

C. homozygous

D. none of these

Answer: B

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13. Which blood group person can donate the blood to all other person ?

A. A

B. B

C. AB

D. O

Answer: D

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14. A dihybrid test cross yielding a result of 1: 1: 1: 1 ratio is indicative of :

A. 4 different type of gametes produced by the F_1 dihybrid

B. homozygous condition of the F_1 dihybrid

C. 4 different type of F_1 generation dihybrids

D. 4 defferent types of gametes produced by the P_1 parent

Answer: A

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15. Indicate, the inheritance of which of the following is controlled by multiple alleles :

A. colour blindness

B. sickle cell anaemia

C. blood group

D. phenylketonuria

Answer: C

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16. How many types of gametes are obtained from a plant of genotype TTRr?

A. one

B. two

C. four

D. many

Answer: B

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17. In a cross between a pure tall pea plant with green and a pure short plant with yellow pod,how many short plants out of 16,you would expect in F_2 generation .

A. 3

B. 9

C. 4

D. 1

Answer: C

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18. In humans, height shows a lot of variation, it is an example of:

A. multiple alleles

B. pleiotropic inheritance

C. polygenic inheritance

D. pseudoalleles

Answer: C

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19. Inheritance of blood group is a condition of:

(A) Co-dominance

(B) Incomplete dominance

,(C)Multiple allelism

(D) Multiple gene

A. B,D

B. B, C

C. A, D

D. A, C

Answer:

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20. Which one of the following represents a test cross?

A. Ww $\times$ WW

B. Ww $\times$ Ww

C. Ww $\times$ ww

D. WW $\times$ WW

Answer: C

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21. The term genome denotes :

A. haploid set of chromosome

B. bivalent

C. monovalent

D. diploid chromsome set

Answer: A

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22. Test cross is a cross between :

A. hybrid $\times$ dominant parent

B. hybrid $\times$ recessive parent

C. hybrid $\times$ hybrid parent

D. two distantly related spices

Answer: B

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23. Mendel's principle of segregation means that the germ cells always recived :

A. one pair of alleles

B. one quarter of the genes

C. one of the paired alleles

D. any pair of alleles

Answer: C

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24. All the genes contained in a haploid uncleus is called as :

A. gene pool

B. allele

C. genome

D. operon

Answer: C

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25. Inheritances of flower colour is an example of incomplete dominance , which is seen in :

A. Antirrhinum

B. Pisum

C. Solonum

D. Hibiscus

Answer: A

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26. When red blood corpuscles containing both A and B antigens are mixed with your blood serum, they agglutinate. Hence your blood grop is _____ type.

A. AB

B. O

C. A

D. B

Answer: B

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27. A cross in which an organism showing a dominant phenotype is crossed with the

recessive parent in order to know its genotype is colled :

A. monohybrid cross

B. back cross

C. test cross

D. dihybrid cross

Answer: C

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28. Heterozygosity of F_1 hybrids can be determined by:

A. back cross

B. test cross

C. reciprocal cross

D. hybrid cross

Answer: B

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29. Heterozygous tall plant (Tt)is crossed with homozygous dwarf (tt) plant. The what will be the percentage of dwarf plants in the next generation ?

A. 0%

B. 50%

C. 25%

D. 100%

Answer: B

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30. If a cross between two individuals produce offspring with 50% dominant character (A) and 50% recessive character (a) the genotype of parents are:

A. Aa × Aa

B. Aa × aa

C. AA × aa

D. AA × Aa

Answer: B

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31. If F_1 generation has all tall progenies and ratio of F_2 generation is 3:1 (tall :dwarf) then it proves

A. Low of independent assortment

B. Lows of seggregation

C. Low of dominance

D. incomplete dominance

Answer: B

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32. The behavior of the chromosomes was parallel to the behavior of genes during meiosis was noted by

A. Correns

B. Tschermak

C. Sutton and Boveri

D. de Vries

Answer: C

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33. Which of the folowing is the number of alleles for blood group in an individual ?

A. 1

B. 2

C. 3

D. 4

Answer: C

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34. In an organism, tall phenotype is dominant over recessive dwarf phenotype, and the alleles are designated as T and t respectively. Upon crossing two different individuals, total 250 offsprings were obtained, out of which 125 displayed tall phenotype and rest were dwarf. Thus, the genotype of the parents were

A. $TT \times TT$

B. $TT \times tt$

C. Tt $\times$ Tt

D. Tt $\times$ tt

Answer: D

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35. In a monohybrid cross between two heterozygous individual, the number of pure homozygous individuals obtained in F_1 generation is

A. 2

B. 4

C. 6

D. 8

Answer: A

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36. F_2 generation in a Mendelian cross showed that both genotypic and phenotypic

ratios are some as 1 : 2 : 1. It represents a case of

A. co-dominance

B. dihybrid cross

C. monohybrid cross with complete dominance

D. monohybrid cross incomplete dominance

Answer: D

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37. What is the scientific name of the plant with which Mendal worked?

A. Oenothera lamarckiana

B. Oenothera mendeliana

C. Pisum sativum

D. Oryza sativa

Answer: C

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38. When a hybrid tall pea plant is cross fertilized with a dwarf pea plant , the ratio of tall is to dwarf plants grown from the seeds will be :

A. 0.125694444444444

B.

C.

D.

Answer: D

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39. What are the gene pair signifying a trait called?

A. Hybrid

B. Phenotype

C. Pure line

D. Alleles

Answer: D

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40. Who postulated the law of inheritance ?

A. Lamarck

B. Darwin

C. mendal

D. Haeckel

Answer: C

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41. When heterozygous round seeded plant is crossed with a recessive wrinkle seeded plant and round and wrinkle phenotypes will appear in F_1 in the ratio :

A. 1 : 2

B. 2:1

C. 1:1

D. 3:1

Answer: C

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42. What was the phenotypic ratio in F_2 of mendelian . monohybrid cross?

A. 1:1

B. 2:1

C. 3:1

D. 9 : 3 : 3 : 1

Answer: C

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43. What is the genotypic ratio in F_2 OF Mendelian monohybrid cross?

A. 1:1

B. 3:1

C. 1:1

D. 1 : 2 : 1

Answer: D

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44. Character that is expressed in hybrid is :

A. Dominant

B. Recessive

C. Multiple

D. None of these

Answer: A

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45. Character that is suppressed in heterozygous state in called :

A. dominant

B. recessive

C. Suppressed

D. Overshadowed

Answer: B

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46. mendel succeeded in his experiments because:

A. He selected pea plants

B. Independent characters were studied

C. A lot of charcters were selected

D. Pea plant is bisexual

Answer: B

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47. In F_2 generation of a monohybrid cross in what ratio the recessive character appears?

A. $\frac{1}{2}$

B. $\frac{1}{4}$

C. $\frac{3}{4}$

D. 1

Answer: B

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48. In a Mendelian hybrid experiment, F_1 plants are :

A. Heterozygous

B. Homozygous

C. Hemizygoys

D. Dizygous

Answer: A

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49. The character which predominates and clearly seen in F_1 generation is

A. Intermediate

B. Incomplete

C. Recessive

D. Dominant

Answer: D

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50. The term back cross refers to

A. A cross among F_1 hybrid

B. A cross betwee F_1 hybrid and either of parents

C. A cross between F_1 and F_2 plants

D. none of these

Answer: B

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51. Which of the following ratio represents a test cross ?

A. 3:1

B. 9 : 3 : 3 : 1

C. 1 : 2 : 1

D. 1 : 1 : 1 : 1

Answer: D

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52. F_2 generation in a Mendelian cross showed that both genotypic and phenotypic ratios are some as 1 : 2 : 1. It represents a case of

A. Dominance

B. Incomplete dominance

C. Test cross

D. Back cross

Answer: B

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53. A gamete contains how many alleles of a gene ?

A. One

B. Two

C. All

D. None

Answer: A

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54. Find out the genotyps (s) of the offspring of the cross AaBb $\times$ aabb

A. AaBb

B. Aabb

C. AaBb and aabb

D. AaBb, Aabb, aaBb, and aabb

Answer: D

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55. A cross between AaBB x aaBB produces the offspring with genotypes :

A. 1 AaBB : 3 aaBB

B. 3 AaBB : 1 aaBB

C. 1 AaBB : aaBB

D. All AaBB

Answer: C

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56. An allele is said to be dominant if it is expressed in :

A. Heterozygous condition only

B. Homozygous condition only

C. Both heterozygous and homozygous conditions

D. Gametes

Answer: C

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57. Precentage of recessive phenotype in a cross between two hybrid is :

A. $25\ \%$

B. $50\ \%$

C. $75\ \%$

D. $100\ \%$

Answer: A

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58. What will be the percentage of the tall plants with red flower in a cross between TTRr x ttrr, when T stands for tall dominant and R for red dominant ?

A. $25\ \%$

B. $50\ \%$

C. $75\ \%$

D. $100\ \%$

Answer: B

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59. In humans polygenes are responsible for

A. Albinism

B. Haemophilia

C. Colour blindness

D. Skin colour

Answer: D

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60. An F_2 genotypic ratio of 1:4:6:4:1 instead of 9:3:3:1 indicates :

A. Qualitative inheritance

B. Quantitative inheritance

C. Incomplete dominance

D. Multiple allelism

Answer: B

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61. Fill in the blank: Organisms phenotypically similar and but genotypically different are called _____.

A. Heterozygotes

B. Homozygotes

C. Monozygotes

D. Multizygotes

Answer: A

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62. In order to find out the different types of gametes produced by a pea plant having the genotypes AaBb , it should be crossed to a plant with genotypes :

A. AABB

B. AaBb

C. aabb

D. aaBB

Answer: C

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63. Which of the following is most suitable medium for culture of Drosophila melanogaster ?

A. Cow dung

B. Moist bread

C. Agar agar

D. Ripe banana

Answer: D

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64. In mendel's experiments with garden pea , round seed shape (RR) was dominant over wrinkled seeds (rr) ,yellow cotyledon (YY) was dominant over green cotyledon (yy) . What are the expected phenotypes in the F_2 generation of the cross RRYY x rryy ?

A. Round seeds with yellow cotyledons, and wrinkled seeds with green cotyledons

B. Only round seeds with green cotyledons

C. Only wrinkled seeds with yellow cotyledons

D. Only wrikled seeds with green cotyledons

Answer: A

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65. Which one of the following pairs of features is a good example of polygenic inheritance ?

A. Human height and skin colour

B. ABO blood group in humans and flower colour of Mirabilis jalapa

C. Hair pigment of mouse and tongue rolling of humans

D. Human eye colour and sickle - cell anaemia

Answer: A

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66. Mating of an organism to a double recessive in order to determine whether it is homozygous or heterozygous for a character under consideration is called :

A. Reciprocal cross

B. Test cross

C. Dihybrid cross

D. Back cross

Answer: B

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67. Two pea plants were subjected for cross pollination . Of the 183 plants produced in the next generation . 94 plants , were found to be tall and 89 plants were found to be dwarf.The genotypes of the two parental plants are likely to be :

A. TT and tt

B. Tt and Tt

C. Tt and tt

D. TT and TT

Answer: C

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

A. Variable genotype and phenotypic ratios

B. A genotypic ratio of 1 :1

C. A phenotypic ratio of 3:1

D. Similar phenotypic and genotypic ratio of 1 : 2 :1

Answer: D

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69. Discontinuous variations are :

A. Acquired characters

B. Mutations

C. Essential features

D. Non - essential features

Answer: B

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70. When a hybrid tall pea plant is cross fertilized with a dwarf pea plant , the ratio of tall is to dwarf plants grown from the seeds will be :

A. 3 : 1

B. 2 : 1

C. 1 : 3

D. 1 : 1

Answer: D

71. Law of segregation explains expression of recessive characters in :

A. Parental generation

B. F_1 generation

C. F_2 generation

D. All of these

Answer: B

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72. A cross between a organism with dominant phenotype and a homozygous recessive to know the genotype of former is called :

A. back cross

B. test cross

C. reciprocal cross

D. Monohybrid cross

Answer: B

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73. A mother of blood group O has a group O child , the father could be

A. A or B or O

B. O only

C. A or B

D. AB only

Answer: A

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74. After a cross of tall plant and dwarf plant,in F_1 generation ratio of tall : dwarf is 50 : 50. What are the genotypes of parents ?

A. Tall heterozygous , dwarf homozygous

B. Both homozygous

C. Both heterozygous

D. Dwarf heterozygous, tall homozygous

Answer: A

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75. A pair of contrasting characteristics is called :

A. Phenotype

B. Genotype

C. Allele

D. Gene

Answer: C

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76. A couple with blood groups A and B may have children with blood group :

A. A and B only

B. A,B and AB

C. A, B ,AB and O

D. AB only

Answer: C

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77. Which of the following ratio represents a test cross ?

A. 3 : 1

B. 9 : 3 : 3 : 1

C. 1 : 2 : 1

D. 1 : 1 : 1 : 1

Answer: D

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78. An F_2 genotypic ratio of 1:4:6:4:1 instead of 9:3:3:1 indicates :

A. Monogenic

B. Qualitative

C. Quantitative

D. Incomplete

Answer: C

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79. Which term was used by mendel to represent hereditary unit ?

A. Gene

B. allele

C. Factor

D. Elements

Answer: D

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80. Right - handedness is dominant over left-handedness . Most probable gene types

having two right - handed parents , a left handed child are

A. RR x RR

B. RR x Rr

C. Rr x Rr

D. All of these

Answer: C

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81. What types of genotypes are expected when a plant with AABb genotypes is self-pollinated ?

A. 3 AABB : 1 AABb

B. 3 AABB :1 Aabb

C. 1 AABB : 1 Aabb

D. 4 AABB : 8 AABb : 4 AAbb

Answer: D

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82. Which one of the following pairs of features is a good example of polygenic inheritance ?

A. Skin colour in humans

B. Flower colour in Mirabilis jalapa

C. Production of male honeybee

D. Pod shape in garden pea

Answer: A

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83. How many different kinds of gametes will be produced by a plant having the genotype AaBbCC ?

A. Two

B. Three

C. Four

D. Nine

Answer: A

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84. Test cross is a cross between :

A. Crossing between two genotypes with dominant traits

B. Crossing between two genotypes with recessive traits

C. Crossing between two F_1 hybrids

D. Crossing the F_1 hybrid with a double recessive genotype

Answer: D

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85. What is the dominant to recessive ratio in Mendel's monohybrid cross ?

A. 1:1

B. 1:2

C. 3:1

D. 9:3

Answer: C

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86. What are the gene pair signifying a trait called?

A. Hybrid

B. Phenotype

C. Pure line

D. Alleles

Answer: D

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87. In male cells of humans _____ is absent.

A. Golgibodies

B. ER

C. Barr body

D. Sex chromosome

Answer: C

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88. Which organism has taken as experimental material by Morgan for genetic study ?

A. Oenothera lamarckiana

B. Pisum sativum

C. Drosophila melanogaster

D. Musca domestica

Answer: C

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89. Father transmit X- lined trait to _____

A. Sons

B. Daughters

C. BOTH (A) AND (B)

D. None of these

Answer: B

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90. A person with sex chromosomes XXY suffers from :

A. Down's syndrome

B. Turner's syndrome

C. Sturge-Weber syndrome

D. Klinefelter's syndrome

Answer: D

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91. Genetic identity of human male is determined by :

A. Autosome

B. Nucleolus

C. Sex chromosomes

D. Cell organelles

Answer: C

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92. Which one of the following is known as Christmas disease ?

A. Haemophilia B

B. Hepatitis B

C. Down's syndrome

D. Sleeping sickness

Answer: A

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93. Freemartin is an example of :

A. Hormonal cantrol of sex

B. Sex reversal

C. Transformer gene

D. Nutritional control of sex

Answer: A

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94. Girl of normal vision whose father was colour-blind marries a man of normal vision whose father was also colour-blind The sons of this marriage would be :

A. All normal

B. All colour-blind

C. 50% colour-blind

D. 25% colour-blind

Answer: C

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95. Gynandromorph is :

A. Male with female trait

B. Female with male traits

C. Half male and half female

D. None of the above

Answer: C

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96. Barr body repersents :

A. Heterochromatin in male and female cells

B. All heterochromatin in female cells

C. One of the two X-chromosomes in somatic cells of female

D. Y-chromosome in somatic cells

Answer: C

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97. Hypertrichosis is a trait linked to :

A. X-chromosomes

B. Y-chromosomes

C. Autosomes

D. None of the above

Answer: B

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98. A haemophilia man marries a carrier woman. Their children will be :

A. All haemophiliac

B. One-fourth haemophiliac

C. Half haemophiliac

D. One-tenth haemophiliac

Answer: C

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99. Sickle-cell anaemia is an example of :

A. Epistasis

B. Co-dominance

C. Pleiotropy

D. Incomplete dorminance

Answer: C

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100. In human beings,the skin colour is contrilled by :

A. Multiple alleles

B. Polygenic effect

C. Lethal genes

D. None of these

Answer: B

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101. A recessive sex-linked trait in human will be expressed :

A. Only in males

B. More often in males than in females

C. More often in females than in males

D. Equally in both males and females

Answer: B

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102. Discontinuous variations are :

A. Acquired characters

B. Mutations

C. Essential features

D. Non-essential features

Answer: B

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103. The tern gene which was coined by Johannsen was termed by Mendel as

A. Replicon

B. Factor

C. Active principal

D. Cistron

Answer: B

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104. Continuous variations are attributed to meiosis through :

A. Polyploidy

B. Mutations

C. Chromosomal aberrations

D. Crossing over

Answer: D

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105. How many possible genotypes are there for the ABO blood group which are controlled by three multiple alleles ?

A. 6

B. 4

C. 5

D. 1

Answer: A

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106. In a dihybrid cross ,F_2 ratio of 15 : 1 is due to :

A. Recessive epistasis

B. Dominant epistasis

C. Duplicate genes

D. Supplementary genes

Answer: D

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107. When two dominant independently assorting genes react with each other to produce a trait different from that they produced alone,they are called :

A. Duplicate genes

B. Supplementary genes

C. Collaborative genes

D. Complementery genes

Answer: D

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108. Male XX and female XY sometimes occur due to :

A. Deletion

B. Transfer of segments in sex chromosomes

C. Aneuploidy

D. Hormonal imbalance

Answer: B

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109. A disease caused by autosomal primary non-disjunction is :

A. Klinefelter's syndrome

B. Turner's Syndrome

C. Sickle cell anemia

D. Down's syndrome

Answer: D

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110. Sickle-cell anaemia is

A. Sex-linked inheritance

B. Autosomal heritable disease

C. Infectious disease

D. Deficiency disease

Answer: B

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111. When an allele of one gene suppresses an allele of another gene,the phenomenon is called :

A. Dominance

B. Suppression

C. Epistasis

D. Inactivation

Answer: C

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112. Genes of which inheritable traits are present on the X-chromosome ?

A. Albinism

B. Sickle-cell anaemia

C. Haemophilia

D. Malaria

Answer: C

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113. The genotype of a male individual having sexual character of a female could be :

A. XY

B. XO

C. XYY

D. XXY

Answer: D

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114. Human gene determining sex at seventh week of pregnancy called TDF is present on :

A. 21 st pair autosome

B. X-chromosome

C. Y-chromosome

D. None of the above

Answer: C

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115. Somatic chromosomes are autosomes while sex chromosomes are called _____

A. Allosomes

B. Polysomes

C. X-Chromosomes

D. Nullisomes

Answer: A

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116. _____ is a sex -linked trait.

A. Haemophilia

B. Night blindness

C. Xeropthalmia

D. Xeroderma

Answer: A

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117. A cross between hybrid with a double recessive pure plant is called _____

A. Monohybrid cross

B. Test cross

C. Back cross

D. Dihybrid cross

Answer: B

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118. Which genetic disease is regarded as Royel disease ?

A. Red-Green colour blindness

B. Turner's syndrome

C. Klinefelter's syndrome

D. Haemophilia or Bleeder's disease

Answer: D

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119. In birds _____ type of sex determination occurs.

A. XX female XY male

B. XX female XO male

C. ZW female ZZ male

D. ZW female ZO male

Answer: C

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120. Who proposed genic balance theory for determination of sex in Drosophila ?

A. Crew

B. Calvin Bridges

C. Wilson

D. Goldschmidt

Answer: B

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121. Gregor Johann Mendel is regarded as what ?

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122. Which term was used by mendel to represent hereditary unit ?

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123. What the cross between two parents differing in a single character is called ?

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124. Name the genotype of a hybrid tall pea plant.

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125. Depending on which hybridisation experiment Mendel suggested law of independent assortment.

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126. How many autosomes are present in a mature human sperm ?

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127. In which sex of human , colour blindness appears in more numbers.

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128. Roan colour in cattle is due to what condition of genes controlling red and white colour ?

Watch Video Solution

129. What is the scientific name of the plant with which Mendal worked?

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130. Who proposed chromosome theory for heredity ?

Watch Video Solution

131. Whether the haemophilic gene is dominant or recessive ?

Watch Video Solution

132. Genetics tern was proposed by

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133. Which cytological configuration proves occurrence of crossing over ?

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134. In which organism complete linkage is found ?

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135. Who proposed Coupling and Repulsion theory ?

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136. Which cytological phenomenon is antagonistic to linkage ?

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137. The point of contact where the non-sister chromatids of a homologue chromosome cross over each other is called what ?

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138. Give the number of linkage groups of human and drosophila.

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139. Who gave the Cytological Proof of crossing over ?

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140. How many X-chromosomes are present in male grasshopper ?

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141. Which is the smallest chromosome of human ?

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142. Down's syndrome is the result of trisomy of which chromosome ?

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143. Trisomy of which chromosome is responsible for Edward's syndrome ?

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144. Absence of which chromosome causes Turner's syndrome ?

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145. Which chromosome is called Androsome ?

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146. Male member of bees, ants, wasps and sawflies possess how many haploid sets of

chromosomes ?

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147. If one half of the body has male traits and the other half has female characters, what term is applied for such individuals ?

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148. Who first observed the sex chromosomes ?

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149. Who first discovered the sex- linked inheritance ?

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150. Which genetic disease is regarded as Royel disease ?

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151. Whether a woman has the gene that generates beard in man ?

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152. On which chromosome of man holandric genes occur ?

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153. Haemophilia B is otherwise called what disease ?

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154. Name the chromosome disorder which causes due to Robertsonian Translocation .

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155. By which modern technique disputed parentages are solved ?

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156. Who proposed strain and torsion theory to account for crossing over ?

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157. Who proposed breakage first theory for crossing over ?

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158. Crossing over occurs between sister chromatids. True or False ?

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159. The gene for baldness behaves as an autosomal dominant in males and autosomal recessive in female . True and False ?

160. Type of food is responsible for fertile queen and sterile worker bees. True and False ?

161. What will be the eye character of a male child if a colourblind woman marries a normal-visioned man ?

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162. In which mammal the barr body was first discovered ? From which cell ?

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163. In which of the following, sex is determined environmentally ?

A. Bonellia

B. Drosophilia

C. Gypsy moth

D. Cattles

Answer: Bonellia

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164. In birds which sex is heterogametic ?

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165. What is the tendency of two or more genes of the same chromosome to remain together in the process of inheritance called ?

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166. Name the process that breaks the linkage between two genes of the same chromosome

and brings about recombination.

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167. What type of linkage is seen in male Drosophila ?

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168. Which cytological phenomenon is antagonistic to linkage ?

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169. Who proposed genic balance theory for determination of sex in Drosophila ?

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170. Somatic chromosomes are autosomes while sex chromosomes are called _____

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171. What are the chromosome which control body characters, but not the sexual characters called ?

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172. Which theory of sex determination is applicable for freemartins ?

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173. Which factor determines the sex in Bonellia ?

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174. Name the sex chromosomes in man.

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175. Which syndrome is expressed if a man has chromosome constitution 44 autosome and

XXY ?

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176. If the chromosomal composition of a woman is 44 autosomes and X what syndrome she expresses ?

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177. Which pattern of inheritance is seen in sex linked characters ?

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178. On which chromosome of a haemophilic man the gene for haemophilia is present ?

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179. What term describes the changes in the chemical structure of genes or DNA ?

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180. Which term is applied for exchange of chromosomal segments between non-homologous chromosomes ?

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181. Who proposed genic balance theory for determination of sex in Drosophila ?

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182. Fill In The blank : The phenotypic ratio and genotypic ratio of monohybrid test cross is .....

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183. Chiasma formation occurs in____stage.

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184. ____and____chromosomes are normally called sex chromosomes.

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185. ____is called Bleeder's disease.

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186. DNA profiling was first reported by_____.

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187. DNA profiling uses repetitive sequences that are highly variable called____.

Watch Video Solution

188. In PKU, there is no synthesis of enzyme_____.

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189. The recessive genes which are responsible for colour blind are present in___arm of X-chromosome.

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190. ____is considered as a megaproject for determining sequency of base pairs in DNA.

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191. A vector derived from bacterial chromosome is called_____.

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192. Welcome Trust is a charity organisation of_____

Watch Video Solution

193. The number of genes in human genome is_____.

Watch Video Solution

194. About ___ % of human DNA sequence are same every person.

Watch Video Solution

195. ___technique is used for parental testing and criminal investigation.

Watch Video Solution

196. Which procedure is followed for amplification of DNA?

Watch Video Solution

197. DNA fragments can be separated and detected using_____.

Watch Video Solution

198. The change of the genetic materials is called_____.

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199. Holandric genes are located in_____.

Watch Video Solution

200. Number of chromosomes in a human cell is____.

Watch Video Solution

201. What the cross between two parents differing in a single character is called ?

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202. What is the genotypic ratio in F_2 OF Mendelian monohybrid cross?

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203. A cross between hybrid with a double recessive pure plant is called _____

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204. Principle of_____was established by Mendel's monohybrid cross.

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205. The law derived from Mendel's dihybrid cross is_____.

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206. A plant with Rr genotype is crossed with a plant with rr genotype, the ratio of Rr and rr genotypes will be____in the next progeny.

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207. ____is the physical basis of heredity.

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208. ____individuals produce genetically different gametes.

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209. ____individuals produce genetically similar gametes.

Watch Video Solution

210. The checker board used in genetic crosses is called_____.

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211. F_2 generation in a Mendelian cross showed that both genotypic and phenotypic ratios are some as 1 : 2 : 1. It represents a case of

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212. Inheritance of a trait determined by cumulative effect of two or more non-allelic gene pairs is called_____.

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213. A plant with genotype AaBbCc will produce___number of gametes.

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214. ABO blood group of humans is determined by____alleles.

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215. Continuous variations are seen in____characters.

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216. Suddenly appearing large and stable variations in organisms is called_____.

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217. The trait which remains hidden in the heterozygotes is called_____.

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218. Who proposed chromosome theory for heredity ?

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219. The pigment responsible for skin colour of humans is____.

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220. De Vries , Correns and _____rediscovered Mendel's work.

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221. Bended part of X chromosome contains testis determining genes.

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222. Drone is a fertile female.

Watch Video Solution

223. Free martin in humans develop due to hormonal influence.

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224. Total number of chromosomes in human female is 36.

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225. A part of chromosome (eukaryotic) is called gene.

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226. Alec Jeffreys determined the sequence of amino acids in proteins.

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227. In humans, autosomes carry genes for determining sex.

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228. Crossing over occurs during leptotene stage of meiosis.

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229. Synapsis occurs during pachytene stage of meiosis.

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230. The karyotype of Klinefelter syndrome is 45+XXY=48

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231. The principles behind inheritance is called heredity.

A. True

B. False

C.

D.

Answer:

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232. The differences in phenotype of organisms due to the effect of environment is called environmental heredity.

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233. Recessive character is lost in the F_1 generation.

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234. Gregor Mendel is called father of genetics.

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235. Quantitative traits are monogenic.

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236. Law of purity of gamete was derived from dihybrid cross.

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237. The checker board used to determine the genotypes of offspring is called Mendel square.

Watch Video Solution

238. Back cross is a test for genotype of an organism with dominant phenotype.

Watch Video Solution

239. Phenotypic ratio and genotypic ratio are the same in case of multiple allelism.

Watch Video Solution

240. ABO blood group of humans is a case of quantitative inheritance.

Watch Video Solution

241. Mention the advantages of selecting pea plant for experiment by Mendel.

Watch Video Solution

242. Explain the law of dominance using a monohybrid cross.

Watch Video Solution

243. Define and design a test-cross.

Watch Video Solution

244. Using a Punnett square, work out the distribution of phenotypic features in the first filial generation after a cross between a homozygous female and a heterozygous male for a single locus

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245. When a cross is made between tall plant with yellow seeds(TtYy) and tall plant with green seed (Ttyy), what proportions of phenotype in the offspring could be expected tp be

tall and green

dwarf and green

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246. Briefly mention the contribution of T.H. Morgan in genetics.

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247. What is pedigree analysis ? Suggest how such an analysis can be useful ?

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248. How is sex determined in human beings ?

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249. A child has blood group O. If the father has blood group A and mother group B, work out the genotypes of the parents and the possible genotypes of the other offsprings.

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250. Write notes: Incomplete dominance

Watch Video Solution

251. What is point mutation ? Give one example.

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252. Mention any two autosomal genetic disorders with their symptoms.

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253. Mention with graphic representation the phenotypic ratio of offspring when a colourblind woman marries a normal man.

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254. Give the chromosomal theory of linkage.

Watch Video Solution

255. What is a Barr body ? What is its significance ?

Watch Video Solution

256. Explain inheritance of colourblindness in human.

Watch Video Solution

257. Explain inheritance of haemophilia.

Watch Video Solution

258. What is Chiasma ?

Watch Video Solution

259. What is likage? mention it's Significance.

Watch Video Solution

260. What do you mean by phenylketonuria ?

Watch Video Solution

261. What is Klinefelter syndrome ?

Watch Video Solution

262. What is Turner's syndrome ?

Watch Video Solution

263. What is Down's syndrome ?

Watch Video Solution

264. Sickle-cell anaemia is

Watch Video Solution

265. Mention the genotype of A, B, AB and O blood groups

Watch Video Solution

266. Who proposed genic balance theory for determination of sex in Drosophila ?

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267. What do you mean by complete linkage ? Give two examples.

Watch Video Solution

268. Explain 'linkage group'.

Watch Video Solution

269. What do you mean by crossing over ?

Watch Video Solution

270. Discuss the genetic basics of wrinkled phenotype of pea seed.

Watch Video Solution

271. How does a mutagen induce mutation ? Explain with example.

Watch Video Solution

272. Can a child have blood group o if his parents have blood group A and b. Explain.

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273. Why is the frequency of red-green colour-blindness is many times higher in males than that in females ?

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274. If a father and son are both defective in red-green colour vision, is it likely that the son inherited the trait from his father ? Comment.

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275. Distinguish between:Incomplete dominance and co-dominance

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276. It is said that the harmful alleles get eliminated from population over a period of time, yet sickle cell anaemia is persisting in human population. Why ?

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277. DISTINGUISH BETWEEN: Genotype and phenotype

Watch Video Solution

278. DISTINGUISH BETWEEN:Homozygous and heterozygous

Watch Video Solution

279. DISTINGUISH BETWEEN:Monohybrid and dihybrid cross

Watch Video Solution

280. DISTINGUISH BETWEEN:Test cross and back cross

Watch Video Solution

281. DISTINGUISH BETWEEN:Complete and incomplete dominance

Watch Video Solution

282. DISTINGUISH BETWEEN:Qualitative and quantitative inheritance

Watch Video Solution

283. DISTINGUISH BETWEEN:Dominant characters and Recessive characters

Watch Video Solution

284. WRITE SHORT NOTES ON: Variation

Watch Video Solution

285. WRITE SHORT NOTES ON: Monohybrid cross

Watch Video Solution

286. WRITE SHORT NOTES ON: Dihybrid cross

Watch Video Solution

287. WRITE SHORT NOTES ON: Law of segregation

Watch Video Solution

288. WRITE SHORT NOTES ON: Back cross

Watch Video Solution

289. WRITE SHORT NOTES ON: Test cross

Watch Video Solution

290. WRITE SHORT NOTES ON: Chromosome theory of inheritance

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291. WRITE SHORT NOTES ON: Incomplete dominance

Watch Video Solution

292. WRITE SHORT NOTES ON: Multiple allelism

Watch Video Solution

293. WRITE SHORT NOTES ON:Quantitative inheritance

Watch Video Solution

294. WRITE SHORT NOTES ON: Genotypes of A, B, AB and O blood groups

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295. A normal visioned woman, whose father is colourblind, marries a normal visioned man. What would be probability of her sons and daughters to be colourblind ? Explain with the help of a pedigree chart.

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296. Explain Mendel's monohybrid cross and discuss the law of purity of gametes.

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297. What is the law of independent assortment ? Explain the law by Mendel's dihybrid cross.

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298. Describe Mendel's monohybrid and dihybrid experiment and state the laws derived from them.

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299. State and explain Mendel's laws of inheritance.

Watch Video Solution

300. Explain chromosomal theory of sex determination.

Watch Video Solution

301. Give an account of sex linked inheritance in humans.

Watch Video Solution

302. What is sexlinked inheritance ? Explain inheritance of haemophilia in man.

Watch Video Solution

303. Explain inheritance of colourblindness in human.

Watch Video Solution

304. Explain chromosomal disorders in man.

Watch Video Solution

305. Write a short notes on: Linkage

Watch Video Solution

306. Write a short notes on: Crossing over

Watch Video Solution

307. Write a short notes on: Haemophilia

Watch Video Solution

308. Write a short notes on: Colour blindness

Watch Video Solution