



BIOLOGY

BOOKS - SARAS PUBLICATION

CLASSICAL GENETICS

Example

1. What is back cross ?



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2. Define Genetics.



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3. What are multiple alleles?



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4. Define heredity.



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5. Define transmission genetics.



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6. What is molecular genetics ?



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7. Define population genetics.



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8. Define quantitative genetics.



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9. Define a gene.



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10. What is variation?



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11. What is continuous variation?



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12. what is discontinuous variation?



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13. What are polygenes?



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14. What is self- Fertilization?



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15. What is meant by emasculation ? When and why does a plant breeder employ this technique ?



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16. What is cross - pollination ? What are its types ?



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17. What is mendelian genetics?



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18. Define alleles.



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19. Define homozygous.



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20. Define heterozygous.



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21. What are hybrids?



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22. Define homozygous recessive.



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23. Define homozygous dominant.



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24. Define monohybrid cross.



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25. What is monohybrid inheritance?



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26. Define reciprocal cross.



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27. What is homozygous tall test cross?



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28. Explain Dihybrid cross in pea plant .



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29. What is dihybrid inheritance?



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30. Define trihybrid cross.



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31. Define dihybrid test cross. Write its ratio.



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32. What is gene interaction?



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33. What is intragenic gene interaction?



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34. What is intergenic gene interaction?



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35. What is incomplete dominance? Give an example.



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36. What is codominance?



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37. Define lethal allele



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38. What is recessive lethality?



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39. What is pleiotrophy?



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40. Describe dominant epistasis with an example.



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41. What is plasmagene?



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42. What is an epistatic gene?



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43. What is a hypostatic gene?



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44. Explain polygenic inheritance with an example.



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45. What is meant by cytoplasmic inheritance ?



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46. What is mitochondrial inheritance?



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47. Write a short note on Atavism.



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48. What is cytoplasmic male sterility?



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49. What is cytoplasmic male sterility?



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50. Differentiate incomplete dominance and codominance.



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51. Differentiate continuous variation with discontinuous variation.



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52. Differentiate genotype and phenotype.



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53. Among the following characters which one was not considered by Mendel in his experimentation pea ?

A. Stem - Tall or dwarf

B. Trichome - glandular or non-glandular

C. Seed - Green or yellow

D. Pod - Inflated or constricted

Answer:



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54. Give the names of the scientist who rediscovered Mendelism.



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55. What is back cross ?



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56. Define Genetics.



Watch Video Solution

57. What are multiple alleles?



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58. What is meant by cytoplasmic inheritance ?



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59. What is meant by true breeding or purebreeding lines / strain ?



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60. What are the reasons for Mendel's successes in his breeding experiments?



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61. Name the seven contrasting traits of Mendel.



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62. Differentiate incomplete dominance and codominance.



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63. Explain the law of dominance in monohybrid cross.



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66. Differentiate continuous variation with discontinuous variation.



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67. Explain with an example how single genes affect multiple traits and alleles the phenotype of an organism.



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68. Assertion: Mitochondrial and chloroplast inheritance is not through nuclear gene.

Reason: During fertilization, the female plant contributes cytoplasmic gene. The male plant contributes nuclear and not cytoplasm.

A. Both assertion and reason are true and reason is correct explanation of assertion.

B. Both assertion and reason are true but reason is not correct explanation of

assertion.

C. Assertion is true but reason is false.

D. Both assertion and reason are false.

Answer:



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69. Define heredity.



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70. Name the four major subdisciplines of genetics.



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71. Define transmission genetics.



[Watch Video Solution](#)

72. What is molecular genetics ?



[Watch Video Solution](#)

73. Define population genetics.



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74. Define quantitative genetics.



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75. What is a gene?



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76. What traits are transmitted by genes from parents to offspring?



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77. What is variation? What are its types?



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78. What is continuous variation?



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79. what is discontinuous variation?



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80. What are polygenes?



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81. What are the terms used for genes by Mendel?



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82. What is self- Fertilization?



[Watch Video Solution](#)

83. Define Emasculation.



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84. What is cross-pollination?



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85. What is Mendelian genetics?



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86. In what way, Mendel's work on the mechanism of inheritance prove to be beneficial?



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87. What are the traits involved in purple colour of Mendel's pea plant?



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88. Define alleles.



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89. Define homozygous.



Watch Video Solution

90. Define heterozygous.



Watch Video Solution

91. What are hybrids?



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92. Define homozygous recessive.



Watch Video Solution

93. Define homozygous dominant.



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94. What are the three laws of Mendel?



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95. The laws proposed by Mendel from the observations on monohybrid cross.





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96. The laws proposed by Mendel from the observations on monohybrid cross.



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97. Differentiate genotype and phenotype.



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98. State the law of segregation.



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99. What is the other name for law of segregation?



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100. State the law of independent assortment.



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101. Why is independent assortment important?



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102. Define monohybrid cross.



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103. Genotypic ration of monohybrid cross



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104. What is monohybrid inheritance?



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105. Define reciprocal cross.



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106. What is empirical approach and empirical law ?



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107. Define and design a test-cross.



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108. What is homozygous tall test cross?



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109. What is homozygous tall test cross?



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110. Which chromosomes of pea plant has three characters studied by Mendel? What are these characters?



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111. What are the compounds responsible for expression of height of Mendel's pea plant?



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112. What are the components responsible for expression of dwarf height of Mendel's pea plant?



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113. Name the components responsible for the pink colour flowers of 4 O' clock plant.



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114. Define dihybrid cross.



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115. What is the phenotypic ratio of dihybrid cross?



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116. What is dihybrid inheritance?



[Watch Video Solution](#)

117. What is the starch carbohydrate present in round pea seed? Is it soluble or insoluble?



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118. What are the components which produce round seed in Mendel's pea plant?



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119. What are the components which produce wrinkled seed in Mendel's pea plant?



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120. Define trihybrid cross.



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121. Define dihybrid test cross. Write its ratio.



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122. What is the phenotypic ratio of trihybrid cross?



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123. A plant has the genotype L1 Mm Nn. What type of hybrid is it? How many gametes can it produce? What are they?



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124. What is gene interaction? Write its types.



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125. What is intragenic gene interaction?



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126. Give some example for intragenic interaction.



[Watch Video Solution](#)

127. What is intergenic gene interaction?



[Watch Video Solution](#)

128. Give some example for intragenic interaction.



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129. What is incomplete dominance? Give an example.



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130. What is the phenotypic ratio in case of incomplete dominance



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131. What is codominance? Give an example.



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132. What are the examples for codominance?



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133. An example for co-dominance:



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134. What is the phenotypic and genotypic ratio for codominance?



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135. Define lethal allele



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136. What is recessive lethality?



[Watch Video Solution](#)

137. What is recessive lethality?



[Watch Video Solution](#)

138. What are the types of lethal genes?



[Watch Video Solution](#)

139. What is the modified genotypic ratio in recessive lethals?



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140. What is pleiotropy? Give an example.



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141. Describe dominant epistasis with an example.



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142. What is an epistatic gene?



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143. What is a hypostatic gene?



Watch Video Solution

144. What is the phenotypic ratio of dominant epistasis in summer squash?



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145. Explain polygenic inheritance with an example.



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146. What is the phenotypic ratio for polygenic inheritance?



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147. What is plasmagene?



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148. What is chloroplast inheritance?



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149. What is mitochondrial inheritance?



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150. What are the types fo mitochondrial inheritance?



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151. Write a short note on Atavism.



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152. Give an example for atavism.



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153. Inheritance of chloroplast and mitochondria characters are non-mendelian inheritance Pattern. Why?



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154. Why did Mendel select pea plant for this experiments?



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155. Name and describe the interaction which is introduced by W. Bateson.



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156. Explain the gene which is responsible for the purple colouration of pea flower.



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157. How was the genetic mystery of Mendel's white flowers of pea plant solved?



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158. Write the sexual reproduction in Oedogonium.



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159. Explain the trihybrid cross.



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160. Explain about the importance of variation ?



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161. List out the advantages of law of independent assortment.



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162. Write about dihybrid test cross.



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163. Describe reciprocal cross.



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164. What is the cross done to determine whether a tall plant is homozygous or heterozygous genotype? Write a note on it.



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165. How do you demonstrate co-dominance in plants at the molecular level?



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166. What is cytoplasmic male sterility ?



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167. What is cytoplasmic male sterility?



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168. Based on the law of segregation, how do you prove that "gametes are never hybrid".



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169. What is a dihybrid cross ?



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170. What is the gene which causes the death of an organism? Explain it with its type.



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171. When two aurea coloured snapdragon F_1 plants are crossed, we will get 1:2 ratio instead of the 1:2:1 ratio. Why? Give the inheritance pattern.



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172. When 4 O' clock plant with red flower is crossed with white flower, the F_1 plant produces pink flower. What is this type of inheritance? Explain the inheritance at the molecular level.



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173. Find out the molecular explanation for the wrinkled pea seeds used by Mendel.



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174. How did Mendel perform cross pollination?



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175. Define monohybrid cross.



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176. What are the compounds responsible for expression of height of Mendel's pea plant?



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Exercise

1. Extra nuclear inheritance is a consequence of presence of genes in

- A. Mitochondria and chloroplasts
- B. Endoplasmic reticulum and mitochondria
- C. Ribosomes and chloroplast
- D. Lysosomes and ribosomes

Answer:



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2. How many different types of gametes will be produced by a plant having the genotype $AABbCc$?

A. Three

B. Four

C. Nine

D. Two

Answer:



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3. In Mendel's experiments with garden pea, round seed shape (RR) was dominant over wrinkled seeds (r), yellow cotyledon (YY) was dominant over green cotyledon (yy). What are the expected phenotypes in the F_1 generation of the cross $RRYY \times rryy$?

A. Only round seeds with green cotyledons

B. Only wrinkled seeds with yellow cotyledons

C. Only wrinkled seeds with green cotyledons

D. Round seeds with yellow cotyledons and wrinkled seeds with yellow cotyledons

Answer:



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4. The gene responsible for the production of anthocyanin pigment.

A. Gene R

B. Pigment A

C. Pea Gene A

D. Gene C

Answer:



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5. The process in which the F1 hybrid is crossed with any one of the parental genotypes is

A. Test cross

B. Dihybrid cross

C. Back cross

D. Monohybrid cross

Answer:



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6. Give the names of the scientist who rediscovered Mendelism.



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7. What is back cross ?



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14. What is meant by true breeding or purebreeding lines / strain ?



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15. What is meant by cytoplasmic inheritance ?



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16. How was the genetic mystery of Mendel's white flowers of pea plant solved?



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17. Write about the gene gun method in the expression of anthocyanin.



[Watch Video Solution](#)

18. What is the cross done to determine whether a tall plant is homozygous or heterozygous genotype? Write a note on it.



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19. Name the seven contrasting traits of Mendel.



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20. Differentiate continuous variation with discontinuous variation.



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21. Write about Atavism.



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22. Explain the process of cross-pollination in pea flowers with a diagram.



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23. Extra nuclear inheritance is a consequence of presence of genes in

A. Mitochondria and chloroplasts

B. Endoplasmic reticulum and
mitochondria

C. Ribosomes and chloroplast

D. Lysosomes and ribosomes

Answer:



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

A. $aaBB$

B. $AaBB$

C. $AABB$

D. $aabb$

Answer:



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25. How many different types of gametes will be produced by a plant having the genotype AABbCc?

- A. Three
- B. Four
- C. Nine
- D. Two

Answer:





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26. Which one of the following is an example for polygenic inheritance ?

- A. Flower colour in *Mirabilis jalapa*
- B. Production of male honey bee
- C. Pod shape in garden pea
- D. Skin colour in humans

Answer:



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27. In Mendel's experiments with garden pea, round seed shape (RR) was dominant over wrinkled seeds (r), yellow cotyledon (YY) was dominant over green cotyledon (yy). What are the expected phenotypes in the F_1 generation of the cross $RRYY \times rryy$?

A. Only round seeds with green cotyledons

B. Only wrinkled seeds with yellow cotyledons

C. Only wrinkled seeds with green cotyledons

D. Round seeds with yellow cotyledons and wrinkled seeds with yellow cotyledons.

Answer:



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28. Test cross involves

- A. Crossing between two genotypes with recessive trait
- B. Crossing between two F_1 hybrids
- C. Crossing the F_1 hybrid with a double recessive genotype
- D. Crossing between two genotypes with dominant trait

Answer:



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

A. 9 : 1

B. 1 : 3

C. 3 : 1

D. 50 : 50

Answer:



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30. The genotype of a plant showing the dominant phenotype can be determined by

- A. Back cross
- B. Test cross
- C. Dihybrid cross
- D. Pedigree analysis

Answer:



31. Select the correct statements from the ones given below with respect to dihybrid cross

A. Tightly linked genes on the same chromosomes show very few combination.

B. Tightly linked genes on the same chromosomes show higher

combinations

C. Genes far apart on the same chromosomes show very few recombinations.

D. Genes loosely linked on the same chromosomes show similar recombinations as the tightly linked ones.

Answer:



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32. Which Mendelian idea is depicted by a cross in which F_1 generation resembles both the parents.

A. Tightly linked genes on the same chromosomes show very few combinations.

B. Tightly linked genes on the same chromosomes show higher combinations

C. Genes far apart on the same chromosomes show very few recombinations.

D. Genes loosely linked on the same chromosomes show similar recombinations as the tightly linked ones.

Answer:



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33. Fruit color in squash is an example for

- A. Recessive epistasis
- B. Dominant epistasis
- C. Complementary genes
- D. Inhibitory genes

Answer:



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34. In his classic experiments on Pea plants, Mendel did not use

A. Flowering position

B. Seed colour

C. Pod length

D. Seed shape

Answer:



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35. The epistatic effect, in which the dihybrid cross $9:3:3:1$ between $AaBb \times AaBb$ is modified as

A. Dominance of one allele on another allele of both loci

B. Interaction between two alleles of different loci

C. Dominance of one allele to another alleles of same loci

D. Interaction between two alleles of same
loci

Answer:



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36. In a test cross involving F_1 dihybrid flies, more parental type offspring were produced than the recombination type offspring. This indicates

- A. The two genes are located on two different chromosomes
- B. Chromosomes failed to separate during meiosis
- C. The two genes are linked and present on the same chromosome.
- D. Both of the characters are controlled by more than one gene

Answer:



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37. The genes controlling the seven pea characters studied by Mendel are known to be located on how many different chromosomes ?

A. Seven

B. Six

C. Five

D. Four

Answer:



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38. Which of the following explains how progeny can possess the combinations of traits that none of the parents possessed ?

- A. Law of segregation
- B. Chromosome theory
- C. Law of independent assortment
- D. Polygenic inheritance

Answer:



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39. 'Gametes are never hybrid'. This is a statement of

- A. Law of dominance
- B. Law of independent assortment
- C. Law of segregation
- D. Law of random fertilization

Answer:



40. Gene which suppresses other genes activity but does not lie on the same locus is called as

- A. Epistatic
- B. Supplement only
- C. Hypostatic
- D. Codominant

Answer:



41. Pure tall plants are crossed with pure dwarf plants. In the F_1 generation, all plants were tall. These tall plants of F_1 generation were selfed and the ratio of tall to dwarf plants obtained was 3:1. This is called

- A. Dominance
- B. Inheritance
- C. Codominance
- D. Heredity

Answer:



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42. The dominant epistasis ratio is

A. 9:3:3:1

B. 0.50209490740741

C. 0.37712962962963

D. 0.37917824074074

Answer:



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43. Select the period for Mendel's hybridization experiments

A. 1856 - 1863

B. 1850 - 1870

C. 1857 - 1869

D. 1870 - 1877

Answer:



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44. (a) Bring out the inheritance of chloroplast gene with an example.

Chloroplast Inheritance



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45. Father of Genetics, Gregor Johann Mendel was born on.

A. 22nd September 1822

B. 20(*nd*)Jy1822

C. 23rd Jy1822

D. 22nd Jy1832

Answer:



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46. The first systematic researcher in the field of genetics.

A. Huger De Vries

B. H. Nilsoon

C. Mendel

D. W. Bateson

Answer:



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47. Who introduced the term genetics.....

A. Watson

B. W. Bateson

C. Mendel

D. Carl Correns

Answer:



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48. This is a method followed by Mendel in flowers to avoid self-fertilization.

A. Hybridization

B. Emasculation

C. Sterilization

D. Bagging

Answer:



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49. The gene responsible for the production of anthocyanin pigment.

A. Gene R

B. Pigment A

C. Pea Gene A

D. Gene C

Answer:



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50. Write the F_2 phenotypic ratio of (i)

Recessive epistasis (ii) Duplicate genes

A. 12: 3: 1

B. 9: 4: 3

C. 9:3:4

D. 13:3

Answer:



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51. The gene for cytoplasmic male sterility in pearl maize is found in.

A. Nuclear DNA

B. Cytoplasmic DNA

C. Plasmid

D. Mitochondrial DNA

Answer:



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52. Genotypes and phenotypes of a cross are graphically represented by.

A. Checks

B. Square board

C. Punnett's Square

D. Cross board

Answer:



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53. The phenomenon in which two alleles are expressed simultaneously in the heterozygous condition.

A. Incomplete dominance

B. Epistatic

C. Atavism

D. Codominance

Answer:



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54. The process in which the F1 hybrid is crossed with any one of the parental genotypes is

A. Test cross

B. Dihybrid cross

C. Back cross

D. Monohybrid cross

Answer:



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55. If two genes experience independent assortment, which assumption is most likely true?

- A. They are located in close proximity on the same chromosome
- B. Crossing over between the genes does not occur
- C. The genes are located on different chromosomes
- D. The expression of one gene does not affect the expression of the other

Answer:



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56. The F_1 cross which produces 8 different gametes and 64 different zygotes is observed in.

A. Monohybrid cross

B. Dihybrid cross

C. Trihybrid cross

D. Dihybrid test cross

Answer:



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57. In a cross between heterozygous tall Tt and homozygous tall TT . There is a progeny of 12. How many of them would be tall?

- A. 6
- B. 8
- C. 12
- D. 9

Answer:



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58. Which one is the recessive trait of the seven characters studied by Mendel?

- A. Yellow pod colour
- B. Green pod colour
- C. Inflated pod form
- D. AXIIal flower position

Answer:



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59. The number of types of gametes produced by homozygous parent is.

A. 3

B. 1

C. 2

D. 4

Answer:



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60. The character that is expressed in the F_1 generation of monohybrid cross is

- A. Heterozygous recessive
- B. Homozygous recessive
- C. Heterozygous dominant
- D. Homozygous dominant

Answer:



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61. The experiment demonstrated in the wheat kernels to explain the combined effect of several genes on a singly trait was done by.

A. Bateson

B. E. Baur

C. H. Nilsson Ehle

D. Mendel

Answer:



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62. The cross that helps to identify the heterozygosity of the hybrid.

A. Recessive back cross

B. Back cross

C. Test cross

D. Dominant back cross

Answer:



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63. The inheritance that affects the height and the skin colour in humans.

A. Polygenic inheritance

B. Multiple inheritance

C. Chloroplast inheritance

D. Mitochondrial inheritance

Answer:



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64. An allele is

A. Homozygous gene

B. Heterozygous gene

C. Gene

D. Alternate form of gene

Answer:



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65. The gene that suppresses or masks the phenotypic expression of a gene at another locus is.

A. Hypostatic

B. Epistatic

C. Dominant

D. Recessive

Answer:



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66. Identify the Non-Mendelian inheritance.

A. Extra Nuclear inheritance

B. Extra chromosomal inheritance

C. Monohybrid cross

D. Both a and b

Answer:



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67. Mendel's paper entitled.....was published in the Brunn society of Natural History.

- A. Study of Pea plant
- B. Experiments on plant
- C. Experiments on pea plant
- D. Experiments on plant hybrids

Answer:



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68. Mendel's theory of inheritance is known as.

A. Particular theory

B. Gene theory

C. Hereditary

D. factors theory

Answer:



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69. Pea Gene A is responsible for the production of.

A. Protein

B. White pigment

C. Anthocyanin pigment

D. Active protein

Answer:



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70. The F_1 heterozygous individuals are called.

A. TT

B. tt

C. Hybrids

D. Zygotes

Answer:



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71. Phenotypic ration of monohybrid cross

A. 1 : 2 : 1

B. 2 : 1

C. 3 : 1

D. 1 : 1

Answer:



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72. The plant height in the pea plant is controlled by the active form of.

A. Auxins

B. Proteins

C. Multiple genes

D. Gibberellins

Answer:



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73. The phenotypic ratio of dihybrid cross is.

A. 9 : 3 : 3 : 1

B. 13: 2: 1

C. 12: 3: 1

D. 9: 2: 3: 2

Answer:



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74. Mendel's dihybrid ratio is based on the probability including.

A. Segregation

B. Independent assortment

C. Random fertilization

D. All of the above

Answer:



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75. Identify which is not an intragenic gene interaction.

A. Codominance

B. Multiple inheritance

C. Pleiotropic genes

D. Epistasis

Answer:



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76. E.Baur reported a lethal gene in Sanpdragon. It is an example for.

A. Heterozygous lethality

B. Dominant lethality

C. Recessive lethality

D. None of these

Answer:



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77. Sickle cell anaemia is an example for which type of intragenic gene interaction.

A. Codominance

B. Pleiotropy

C. Multiple alleles

D. Incomplete dominance

Answer:



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78. The phenotypic ratio of the supplementary gene interaction is.

A. 9:6:1

B. 9: 7

C. 9: 3: 4

D. 13: 3

Answer:



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79. The laws proposed by Mendel from the observations on monohybrid cross.

A. Law of dominance and law of segregation

B. Law of recessive and law of dominance

C. Law of genes and law of alleles

D. Law of assortment and law of recessive

Answer:



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80. The law of dominance and the Law of segregation gives suitable explanation to Mendel's.

A. Reciprocal cross

B. Test cross

C. Dihybrid cross

D. Monohybrid cross

Answer:



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81. Le allele codes for the functional enzyme.

A. GA

B. GA3

C. GA1

D. GA4

Answer:



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82. The particular units that are transmitted from one generation to another is called.

A. Gene

B. Factors

C. Functional unit of inheritance

D. All the three

Answer:



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83. Mendel's data is concerned with the proportions of.

A. Parents

B. Characters

C. Offspring

D. Individuals

Answer:



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84. Which is an universal genetic material?

A. DNA

B. Protoplast

C. Chloroplast

D. Cytoplasm

Answer:



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85. What forms the raw materials for evolution?

A. Alleles

B. Heredity

C. Variation

D. Genes

Answer:



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86. Punnett's square is named after the British Geneticist.

A. Reginald C. Punnett

B. Genetic material

C. Gregor Mendel

D. Alleles

Answer:



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87. The independent, self-replicating extra chromosomal unit located in the cytoplasmic organelles is called.

A. nucleus

B. plasmid

C. golgi body

D. ribosome

Answer:



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88. The term Is the genetic constitution of an individual.

A. Plasmid

B. Chloroplast

C. Plasmagene

D. All of the above

Answer:



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89. Genetics is a science which deals with.

A. Heredity

B. Variation

C. Heredity and variation

D. None of the above

Answer:



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90. Identify the trait which is affected by polygenes and environmental factors.

A. Human eye colour

B. Human hair colour

C. Human height and skin colour

D. None of the above

Answer:



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91. Mendel studied.....pairs of contrasting traits of pea plant.

A. Five

B. Seven

C. Nine

D. Eleven

Answer:



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92. What were the subjects, Mendel applied in his breeding experiments along with biology?

A. Mathematics and History

B. Mathematics and Chemistry

C. Mathematics and Statistics

D. Mathematics and Ecology

Answer:



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93. Pure line breed.

A. Homozygosity

B. Heterozygosity

C. Offspring

D. Hybrids

Answer:



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94. Recessive traits of garden peas, seed shape and colour are.

A. Wrinkled, Yellow

B. Wrinkled, Green

C. Round, Yellow

D. Round, Green

Answer:



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95. The gene for plant height character.

A. Le

B. Fa

C. GP

D. V

Answer:



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96. No blending of genes is seen in this type of intragenic gene interaction.

- A. Incomplete dominance
- B. Codominance
- C. Multiple alleles
- D. Pleiotropy

Answer:



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97. The pigment produced by the mutant, defective allele R^2 in incomplete dominance.

A. Yellow

B. Pink

C. White

D. Red

Answer:



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98. The ABO blood group is due to.

- A. Codominance
- B. Complete dominance
- C. Incomplete dominance
- D. Over dominance

Answer:



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99. The three traits which are controlled by a single pleiotropic gene having dominant and recessive alleles in *Pisum sativum*.

A. Pod colour, seed colour and leaf axillary spot

B. Flower colour, seed colour and leaf axillary spot

C. Flower colour, seed colour and pod colour

D. None of the above

Answer:



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100. The ratio of the F_2 generation showing polygenic inheritance?

A. 63: 1

B. 62: 2

C. 23: 1

D. 9: 3: 3: 1

Answer:



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101. The reappearance of an ancestral trait in the present day plants is called.

A. Polygenic inheritance

B. Pleiotropy

C. Atavism

D. Epistasis

Answer:



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102. The precursor molecule involved in the height in Mendel's pea plant.

A. Lele

B. AuXIIIn

C. Gibberellin

D. Cytokinin

Answer:



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103. The character located on the 7th chromosome of pea plant.

A. Flower colour

B. Seed shape

C. Seed colour

D. Pod shape

Answer:



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104. The gene responsible for pod shape in pea plant.

A. V

B. R

C. GP

D. A

Answer:



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105. The dominant character in pea plant.

A. Yellow pod colour

B. Green pod colour

C. Constricted pod shape

D. White flower colour

Answer:



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106. The genotype responsible for yellow fruit in summer squash.

A. $wwGg$

B. $wwgg$

C. Wwgg

D. WwGg

Answer:



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107. The ratio occurring in polygenic inheritance of wheat kernel.

A. 1 : 6 : 15 : 20 : 16 : 5

B. 1 : 6 : 15 : 20 : 15 : 5 : 1

C. 1 : 6 : 15 : 20 : 15 : 6 : 1

D. 1 : 6 : 15 : 20 : 16 : 6 : 1

Answer:



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108. This plant cannot be used for crossing.

A. Female plant with sterile cytoplasm

B. Male plant with normal cytoplasm

C. Male plant with normal cytoplasm

D. Female plant with normal cytoplasm

Answer:



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109. Who proposed the chromosome theory of inheritance _____

A. Monohybrid cross

B. Dihybrid cross

C. Trihybrid cross

D. Test cross

Answer:



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110. Electrophoresis or chromatography demonstrates this.

A. Multiple alleles

B. Polygenes

C. Incomplete dominance

D. Codominance

Answer:



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111. Continuous variation is due to?

- A. *Pisum sativum*
- B. Wheat kernel
- C. *Mirabilis jalapa*
- D. ABO blood group

Answer:



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112. Mendel's last law is

- A. Incomplete dominance
- B. Dominant epistasis
- C. Polygenic inheritance
- D. Mitochondrial inheritance

Answer:



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113. Assertion: In intergenic gene interactions, interlocus interactions take place between the alleles at different loci.

Reason: In the first locus, the white is dominant to yellow and green colour whereas in the second locus, yellow is dominant to green colour.

A. Both assertion and reason are true and reason is correct explanation of

assertion.

B. Both assertion and reason are true but reason is not correct explanation of assertion.

C. Assertion is true but reason is false.

D. Both assertion and reason are false.

Answer:



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114. Assertion: Genes can exist in alternate forms.

Reason: Allele for the height of pea plant is expressed as Tall (T) and Dwarf (t).

A. Both assertion and reason are true and reason is correct explanation of assertion.

B. Both assertion and reason are true but reason is not correct explanation of assertion.

C. Assertion is true but reason is false.

D. Both assertion and reason are false.

Answer:



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115. Assertion: The results of the dihybrid cross led to the generalization of law of independent assortment.

Reason: This law deals with the linked genes.

A. Both assertion and reason are true and reason is correct explanation of assertion.

B. Both assertion and reason are true but reason is not correct explanation of assertion.

C. Assertion is true but reason is false.

D. Both assertion and reason are false.

Answer:



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116. Assertion: Test cross is a cross between an individual of unknown genotype with a homozygous recessive.

Reason: Only the recessive character of an individual can be identified.

A. Both assertion and reason are true and reason is correct explanation of assertion.

B. Both assertion and reason are true but reason is not correct explanation of assertion.

C. Assertion is true but reason is false.

D. Both assertion and reason are false.

Answer:



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117. Assertion: The results of the reciprocal crosses are the same.

Reason: When the parental types are reversed and matings are done in both ways, it is called reciprocal cross.

A. Both assertion and reason are true and reason is correct explanation of assertion.

B. Both assertion and reason are true but reason is not correct explanation of

assertion.

C. Assertion is true but reason is false.

D. Both assertion and reason are false.

Answer:



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118. Assertion: When there is osmotic balance in the seed, it results in smooth, round seeds.

Reason: During seed maturation, starch branching enzyme (SBE-I) converts linear

unbranched starch amylose to highly branched starch amylopectin.

A. Both assertion and reason are true and reason is correct explanation of assertion.

B. Both assertion and reason are true but reason is not correct explanation of assertion.

C. Assertion is true but reason is false.

D. Both assertion and reason are false.

Answer:



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119. Assertion: Intermediate phenotype pink coloured flower is seen in F_1 generation showing incomplete dominance.

Reason: One allele is not completely dominant to another allele during allelic interaction.

A. Both assertion and reason are true and reason is correct explanation of

assertion.

B. Both assertion and reason are true but reason is not correct explanation of assertion.

C. Assertion is true but reason is false.

D. Both assertion and reason are false.

Answer:



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