

Class: X  
Subject: Biology  
Topic: How Do Organisms Reproduce?  
No. of Questions: 20

- Q1. What is the gene ratio of  $F_2$  generation in a monohybrid cross?
- a) 3 : 1
  - b) 1:2:1
  - c) 2 : 3
  - d) 3 : 0
- Q2. Which experimental plant was used by Mendel?
- a) Wild pea
  - b) Edible pea
  - c) Garden pea
  - d) Chick pea
- Q3. The transmission of characters from one generation to the next is termed as \_\_\_\_\_.
- a) variation
  - b) heredity
  - c) evolution
  - d) diversity

- Q4. The Mendelian “factors” are now known as \_\_\_\_\_.
- a) genes
  - b) chromosome
  - c) DNA
  - d) Chromatid
- Q5. The differences in the traits among the individuals of a species are known as \_\_\_\_\_.
- a) evolution
  - b) inheritance
  - c) heredity
  - d) variation
- Q6. What is the name given to the plants produced from cross-pollination of parent plants?
- a) F3 plants
  - b) F1 plants
  - c) F2 plants
  - d) F4 plants
- Q7. Which of the following traits always appears in two opposite forms?
- a) contrasting
  - b) recessive
  - c) dominant
  - d) homoallelic

- Q8. The plants produced from self-pollination of first generation plants constitute the \_\_\_\_\_.
- a) parent plants
  - b) F1 plants
  - c) F2 plants
  - d) F3 plants
- Q9. The human traits are influenced by DNA of \_\_\_\_\_.
- a) mother
  - b) father
  - c) siblings
  - d) both (1) and (2)
- Q10. How many pairs of contrasting traits were considered by Mendel in the pea plant?
- a) 6
  - b) 7
  - c) 8
  - d) 9
- Q11. Which of the following options is not a variant in humans?
- a) Shape of hair
  - b) Number of forelimbs
  - c) Attached ear lobes
  - d) Rolling of tongue

- Q12. If Tall (TT) is cross breed with dwarf (tt), what will be the characteristics of F1 plants?
- a) All tall
  - b) Both tall and short
  - c) All short
  - d) In between tall and short
- Q13. There are \_\_\_\_\_ versions for each trait in an offspring.
- a) 2
  - b) 3
  - c) 4
  - d) 5
- Q14. Variations cannot occur due to \_\_\_\_.
- a) crossing over
  - b) mutation
  - c) effect of environment
  - d) asexual reproduction
- Q15. If tall height (TT) is a dominant trait and short height is a recessive trait (tt) in the garden pea, which of the following statements is true?
- a) TT and tt will be tall plants.
  - b) TT and Tt will be tall plants.
  - c) TT and tt will be dwarf plants.
  - d) tt will be tall plants.

- Q16. Which of the following branches of science deals with heredity and variation?
- a) genetics
  - b) zoology
  - c) biotechnology
  - d) botany
- Q17. The ratio of maternal DNA to the paternal DNA in the offspring is \_\_\_\_.
- a) 1 : 1
  - b) 1 : 2
  - c) 2 : 1
  - d) 1 : 0
- Q18. The differences in some of the traits of children from their parents are due to \_\_\_\_.
- a) heredity
  - b) variation
  - c) evolution
  - d) diversity
- Q19. Who is considered to be the father of genetics?
- a) Mendel
  - b) Darwin
  - c) Sutton
  - d) Morgan

- Q20. A crow can never give birth to an eagle due to the essence of \_\_\_\_.
- a) evolution
  - b) heredity
  - c) diversity
  - d) variation

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