

## 18 Multiple choice questions

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1. all the genes present in the cells of an organism
  - a. phenotype
  - b. genetics
  - c. gene
  - d. genotype
  
2. alternative forms of a gene
  - a. gene
  - b. genetics
  - c. hybrid
  - d. alleles
  
3. the offspring of individuals that are pure-breeding for different alleles of a particular gene
  - a. monohybrid
  - b. genotype
  - c. hybrid
  - d. homozygous
  
4. homozygous
  - a. pure-breeding
  - b. segregate
  - c. hybrid
  - d. genetics
  
5. a universally accepted scientific format to represent the inheritance of a particular genetic trait over a number of generations
  - a. segregate
  - b. pedigree analysis
  - c. pure-breeding
  - d. pedigree chart
  
6. the detectable physical, chemical or behavioural characteristics or traits of an organism
  - a. gene
  - b. phenotype
  - c. genetics
  - d. genotype

7. the study of a pedigree chart in a group of related individuals to determine the pattern and characteristics of inheritance of a genetic trait
  - a. segregate
  - b. pedigree chart
  - c. pedigree analysis
  - d. dominant allele
  
8. thread-like structures made of DNA, observed in dividing cells
  - a. homozygous
  - b. genotype
  - c. chromosomes
  - d. phenotype
  
9. the study of heredity and variation in biological systems
  - a. gene
  - b. genotype
  - c. genetics
  - d. phenotype
  
10. the form of a gene which is expressed in the heterozygous (hybrid) condition, masking the other (recessive) form of the same gene
  - a. phenotype
  - b. alleles
  - c. dominant allele
  - d. recessive allele
  
11. the form of a gene which is only expressed in the homozygous condition, and is masked in the heterozygous condition by another (dominant) form of the same gene
  - a. alleles
  - b. segregate
  - c. recessive allele
  - d. dominant allele
  
12. the offspring from the cross-breeding of two distinct races, breeds, varieties, species or genera
  - a. monohybrid
  - b. alleles
  - c. hybrid
  - d. gene

13. physical, or physiological or behavioural difference between individuals in a population which may or may not make them more suited to prevailing environmental conditions
  - a. genotype
  - b. variation
  - c. genetics
  - d. alleles
  
14. separate (as in individual chromosomes that segregate from each homologous pair during meiosis)
  - a. gene
  - b. genetics
  - c. genotype
  - d. segregate
  
15. the set of principles derived by Gregor Mendel relating to the transmission of hereditary characteristics from parent organisms to their children
  - a. segregate
  - b. recessive allele
  - c. Mendel's laws
  - d. genetics
  
16. the smallest physical unit of heredity
  - a. genotype
  - b. alleles
  - c. gene
  - d. genetics
  
17. having two different alleles of a particular gene in a diploid cell for any particular hereditary characteristic
  - a. homozygous
  - b. heterozygous
  - c. chromosomes
  - d. segregate
  
18. having identical alleles of a particular gene in a diploid cell for any particular hereditary characteristic
  - a. homozygous
  - b. heterozygous
  - c. chromosomes
  - d. monohybrid