

## 18 Multiple choice questions

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1. the process by which diploid cells divide and differentiate to become sex cells with half the chromosome number
  - a. gamete formation
  - b. fertilisation
  - c. genetic variation
  - d. genetic recombination
  
2. a method of producing offspring that involves the fusion of male and female gametes to form a zygote, containing a combination of genetic material from both parents
  - a. sex chromosomes
  - b. genetic variation
  - c. gamete formation
  - d. sexual reproduction
  
3. chromosomes that play a role in determining the sex (gender) of an individual
  - a. sex-linked genes
  - b. chromosomes
  - c. sex chromosomes
  - d. genome
  
4. a pattern of inheritance of a non-sexual trait whereby it appears to be gender-linked
  - a. sexual reproduction
  - b. sex-linked genes
  - c. co-dominance
  - d. sex-linked inheritance
  
5. the fusion of male and female gametes during reproduction
  - a. heredity
  - b. fertilisation
  - c. meiosis
  - d. genetic variation
  
6. the process by which a strand of genetic material (DNA or RNA) is broken and then rejoined to a different DNA molecule, either naturally or artificially
  - a. fertilisation
  - b. genetic variation
  - c. genetic recombination
  - d. gamete formation

7. a process of cell division that is considered to be a reduction division because it halves the number of chromosomes in the resulting gametes that it produces
  - a. locus
  - b. meiosis
  - c. genome
  - d. heredity
  
8. thread-like structures made of DNA, observed in dividing cells
  - a. chromosomes
  - b. meiosis
  - c. sex chromosomes
  - d. genome
  
9. an inheritance pattern where both alleles present are expressed in the heterozygote
  - a. co-dominance
  - b. chromosomes
  - c. genome
  - d. meiosis
  
10. the total genetic material within a cell or an individual
  - a. locus
  - b. meiosis
  - c. genome
  - d. heredity
  
11. differences in various traits or features that are genetically determined amongst members of a population
  - a. genetic variation
  - b. genetic recombination
  - c. fertilisation
  - d. gamete formation
  
12. a monomer or subunit of nucleic acids that has a distinct structure made up of sugar, a phosphate and a nitrogenous base
  - a. nucleotide
  - b. meiosis
  - c. locus
  - d. genome

13. the idea that genes, the units of heredity, are carried on chromosomes
  - a. sex-linked inheritance
  - b. chromosomes
  - c. chromosome theory of inheritance
  - d. co-dominance
  
14. random separation of pairs of chromosomes (or genes) during meiosis, giving different traits an equal opportunity of passing into a gamete
  - a. fertilisation
  - b. genome
  - c. genetic variation
  - d. independent assortment
  
15. the position that a gene occupies on a chromosome
  - a. locus
  - b. meiosis
  - c. heredity
  - d. genome
  
16. genes for non-sexual traits, physically linked to the sex chromosome and inherited together with the sexual traits
  - a. sex-linked genes
  - b. crossing over
  - c. sex chromosomes
  - d. sex-linked inheritance
  
17. similarity between parents and offspring as a result of the inheritance of genes, carried on DNA molecules, by offspring from their parents
  - a. nucleotide
  - b. heredity
  - c. meiosis
  - d. genome
  
18. the exchange of DNA as a result of breaking and rejoining between homologous chromosomes during meiosis
  - a. co-dominance
  - b. chromosomes
  - c. genome
  - d. crossing over