

Nussbaum: Thompson & Thompson Genetics in Medicine, 8th Edition

Chapter 02: Introduction to the Human Genome

Test Bank

MULTIPLE CHOICE

1. How many chromosomes do humans normally have in their somatic cells?
 - A. 22
 - B. 23
 - C. 44
 - D. 45
 - E. 46

ANS: E

2. In humans, DNA is associated with several classes of proteins and packaged into complexes known as:
 - A. Histones
 - B. Chromatin
 - C. Nuclei
 - D. Genomes
 - E. Double helices

ANS: B

3. Which of the following represents the pairing of nucleotide bases in DNA?
 - A. Purines-Purines, Pyrimidines-Pyrimidines
 - B. Adenine-Cytosine, Guanine-Thymine
 - C. Adenine-Guanine, Cytosine-Thymine
 - D. Guanine-Cytosine, Adenine-Thymine
 - E. Deoxyribose-Ribose

ANS: D

4. Which of the following are composed of repetitive DNA elements?
- A. Centromeres
 - B. Alu elements
 - C. LINE elements
 - D. Telomeres
 - E. All of the above

ANS: E

5. A human somatic cell spends most of its life in this state:
- A. Meiosis
 - B. Mitosis
 - C. Interphase
 - D. Zygote
 - E. Prophase

ANS: C

6. The arms of a chromosome are designated:
- A. 1 and 2
 - B. Short and long
 - C. p and q
 - D. Individually for each chromosome
 - E. A and B

ANS: C

7. An important and distinct feature of meiosis is:
- A. Recombination
 - B. Chromosome condensation
 - C. Chromosome congression
 - D. Spindle formation

ANS: A

8. Mitosis and meiosis result in the following chromosome complements, respectively:
- A. n , $2n$
 - B. $2n$, n
 - C. Haploid, diploid
 - D. $2n$, $2n$
 - E. n , n

ANS: B

9. Failure of homologous chromosomes to segregate to opposite poles during meiosis is called:
- A. Disjunction
 - B. Missegregation
 - C. Nondisjunction
 - D. Meiotic failure
 - E. Nonsegregation

ANS: C

10. In human males, when is meiosis initiated and completed?
- A. At birth, at ejaculation
 - B. At puberty, at ejaculation
 - C. At birth, at puberty
 - D. At puberty, it is continuous
 - E. At birth, it is continuous

ANS: D

11. In human females, when is meiosis initiated and completed?
- A. At birth, at ovulation
 - B. At birth, it is continuous
 - C. At puberty, at fertilization
 - D. Prenatally, at ovulation
 - E. Prenatally, at fertilization

ANS: E

MULTIPLE RESPONSE

1. The extent of the haplotype block surrounding a disease mutation depends on which two of the following factors?
- A. Marker phasing
 - B. Marker association
 - C. Recombination frequency in the region
 - D. Number of generations since the disease mutation arose
 - E. Marker repulsion

ANS: C, D