

Human Genetics and Health Genealogy

Genealogy · Answer Key · 25 Questions

1. What are the basic units of heredity that are passed from parents to their children?

- A) Cells
- B) Genes**
- C) Tissues
- D) Organs

2. Which molecule carries the genetic instructions for the development and function of living things?

- A) DNA**
- B) Water
- C) Protein
- D) Sugar

3. How many chromosomes do humans typically inherit from each biological parent?

- A) 10
- B) 23**
- C) 46
- D) 92

4. What substance in your body determines physical characteristics like eye color and hair texture?

- A) Blood
- B) DNA**
- C) Bone
- D) Muscle

5. Which of these is a health condition that can be passed down through family genes?

- A) Sunburn
- B) Common Cold
- C) Cystic Fibrosis**
- D) Broken Bone

6. Where is the majority of a human cell's DNA located?

- A) Nucleus**
- B) Cell wall
- C) Cytoplasm
- D) Ribosome

7. What is the term for a permanent change in the DNA sequence that makes up a gene?

A) Mutation

B) Evolution

C) Infection

D) Digestion

8. Which blood-related condition can be inherited from parents?

A) Sickle cell anemia

B) Dehydration

C) Anemia from iron deficiency

D) Motion sickness

9. What is the common term for the family history of health conditions used by doctors to assess risk?

A) Medical pedigree

B) Family health history

C) Social chart

D) Doctor notes

10. Humans typically have how many total chromosomes in each cell?

A) 23

B) 46

C) 69

D) 92

11. Which organ system is primarily responsible for passing genetic information to the next generation?

A) Reproductive system

B) Digestive system

C) Skeletal system

D) Nervous system

12. Inherited traits that are 'recessive' typically require how many copies of the gene to be expressed?

A) One

B) Two

C) Four

D) Ten

13. What is the shape of a DNA molecule?

- A) Double helix**
- B) Square prism
- C) Single sphere
- D) Flat circle

14. Which of these is a trait often influenced by genetics?

- A) Height**
- B) Favorite color
- C) Language spoken
- D) Political view

15. What is the study of how traits are passed from parents to offspring called?

- A) Genetics**
- B) History
- C) Chemistry
- D) Physics

16. Which pair of sex chromosomes typically indicates a biological male?

- A) XX
- B) XY**
- C) YY
- D) XO

17. Which pair of sex chromosomes typically indicates a biological female?

- A) XX**
- B) XY
- C) YY
- D) XO

18. What determines the specific sequence of amino acids in a protein?

- A) DNA sequence**
- B) Water levels
- C) Skin color
- D) Body weight

19. Which of these can affect how your genes are expressed?

- A) Environmental factors**
- B) Writing a letter
- C) Wearing a hat
- D) Walking fast

20. What is a 'carrier' in the context of genetics?

A) A person who has the gene but no symptoms

- B) A person who has a cold
- C) A person who carries heavy boxes
- D) A person who has no genetic risk

21. Genes provide the instructions for the body to build which essential molecules?

A) Proteins

- B) Fats
- C) Carbohydrates
- D) Vitamins

22. Are acquired skills, like playing an instrument, passed directly through DNA to offspring?

- A) Yes, always
- B) Sometimes

C) No, they are learned

- D) Only in adulthood

23. What is the biological process called where genetic material is passed to the next generation?

A) Inheritance

- B) Digestion
- C) Excretion
- D) Respiration

24. Which type of cell does NOT contain a full set of human DNA?

A) Red blood cell

- B) Skin cell
- C) Muscle cell
- D) Liver cell

25. What do scientists call the complete set of genetic material in an organism?

A) Genome

- B) Organism
- C) Population
- D) Species