Unifying Themes of Life Science

Biology · Practice Test · 20 Questions

1. What is the primary focus of Biology?

A) Studying nonliving matter and its properties
B) Studying living things and their interactions with the environment
C) Studying the Earth's geological formations
D) Studying the principles of physics and chemistry

2. Which of the following is a characteristic shared by all living things?

A) They are all made of a single cell.
B) They require sunlight to survive.
C) They are composed of cells.
D) They reproduce identically every time.

3. What are the basic structural and functional units of life?

A) Tissues
B) Organs
C) Organ systems
D) Cells

4. In the biological hierarchy, what comes directly after a tissue?

A) Cell
B) Organ
C) Organ system
D) Organism

5. What is the function of the root system in plants?

A) To produce food through photosynthesis
B) To anchor the plant and absorb water and minerals
C) To transport food to other parts of the plant
D) To attract pollinators for reproduction

6. Which human system is responsible for breaking down food into simpler nutrients?

A) Respiratory system
B) Circulatory system
C) Digestive system
D) Nervous system

7. When a sunflower faces the sunlight, it demonstrates which characteristic of living things?

A) Growth
B) Reproduction
C) Metabolism
D) Responsiveness to stimuli

8. The process by which organisms regulate internal conditions to stay balanced is called:

A) Adaptation
B) Homeostasis
C) Evolution
D) Metabolism

9. What is the function of xylem in plants?

A) Transports food made in leaves
B) Carries water and minerals from roots to leaves
C) Aids in gas exchange
D) Anchors the plant in the soil

10. The brain sending signals to muscles for movement is an example of coordination between which two human systems?

A) Digestive and Circulatory Systems
B) Respiratory and Circulatory Systems
C) Nervous and Muscular Systems
D) Endocrine and Reproductive Systems

11. What does it mean for biological systems to be interdependent?

A) Each system operates completely independently.
B) The success of one system depends on others working properly.
C) Systems only interact during emergencies.
D) Only animals exhibit system interdependence.

12. Which of the following illustrates system interdependence in ecosystems?

A) Animals exhaling carbon dioxide that plants use for photosynthesis
B) Plants growing taller than surrounding trees
C) Rocks eroding over time
D) Water evaporating from a lake

13. Which level of biological organization is made up of different tissues performing a specific function?

A) Cell
B) Tissue
C) Organ
D) Organ system

14. What is the primary role of the excretory system in humans?

A) Transporting oxygen
B) Breaking down food
C) Eliminating waste and maintaining water/salt balance
D) Sending electrical signals

15. The process of producing offspring to ensure the continuation of a species is known as:

A) Growth
B) Metabolism
C) Reproduction
D) Homeostasis

16. Which human system produces hormones that regulate growth and metabolism?

A) Skeletal System
B) Muscular System
C) Nervous System
D) Endocrine System

17. What is the function of the shoot system in plants?

A) Absorbs water and minerals
B) Anchors the plant
C) Includes stems, leaves, flowers, and fruits that make and transport food
D) Stores water in the soil

18. If one part of an organism stopped working, how would it affect the entire organism's system, according to the text?

A) It would have no effect.
B) It would likely affect the entire organism's system.
C) Only other related systems would be affected.
D) It would lead to immediate death of the organism.

19. What is the fundamental unit of life that is active, organized, and self-sustaining?

A) Atom
B) Molecule
C) Cell
D) Tissue

20. The statement 'life thrives on connection, balance, and cooperation' relates to which unifying theme?

A) Characteristics of Living Things
B) Levels of Biological Organization
C) Systems of Related Parts
D) System Interdependence