

Advanced Biology Foundations

Biology · Answer Key · 20 Questions

1. What is the basic structural and functional unit of all living organisms?

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

2. Which organelle is often referred to as the powerhouse of the cell?

- A) Nucleus
- B) Ribosome
- C) Mitochondrion**
- D) Vacuole

3. What substance do plants use to capture sunlight for photosynthesis?

- A) Chlorophyll**
- B) Glucose
- C) Oxygen
- D) Carbon Dioxide

4. What is the process by which a cell divides to create two identical daughter cells?

- A) Meiosis
- B) Mitosis**
- C) Fertilization
- D) Digestion

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

- A) RNA
- B) Protein
- C) DNA**
- D) Lipid

6. What is the primary gas released by plants as a byproduct of photosynthesis?

- A) Nitrogen
- B) Hydrogen
- C) Oxygen**
- D) Helium

7. Which part of the plant is primarily responsible for absorbing water and minerals from the soil?

- A) Leaf
- B) Stem
- C) Flower
- D) Root**

8. What type of organism consumes both plants and animals for energy?

- A) Herbivore
- B) Carnivore
- C) Omnivore**
- D) Decomposer

9. What is the jelly-like substance that fills the inside of a cell?

- A) Cytoplasm**
- B) Cell Wall
- C) Nucleus
- D) Membrane

10. In a food chain, which organisms are known as the primary producers?

- A) Animals
- B) Fungi
- C) Plants**
- D) Bacteria

11. Which human organ is primarily responsible for pumping blood throughout the body?

- A) Lungs
- B) Heart**
- C) Liver
- D) Brain

12. What is the process of water movement through a plant and its evaporation from leaves?

- A) Transpiration**
- B) Respiration
- C) Photosynthesis
- D) Osmosis

13. Which of these is a type of white blood cell that helps fight infection?

- A) Red blood cell
- B) Platelet
- C) Leukocyte**
- D) Plasma

14. What is the protective outer layer of an animal cell called?

- A) Cell wall
- B) Cell membrane**
- C) Chloroplast
- D) Cytoskeleton

15. How many chromosomes do typical human body cells contain?

- A) 23
- B) 46**
- C) 12
- D) 64

16. What do we call an organism that breaks down dead organic material?

- A) Producer
- B) Consumer
- C) Decomposer**
- D) Predator

17. Which gas do humans inhale that is necessary for cellular respiration?

- A) Oxygen**
- B) Carbon dioxide
- C) Nitrogen
- D) Methane

18. What is the main sugar produced during photosynthesis?

- A) Lactose
- B) Glucose**
- C) Fructose
- D) Sucrose

19. Which kingdom do mushrooms belong to?

- A) Plantae
- B) Animalia
- C) Fungi**
- D) Protista

20. What is the term for a specific trait that helps an organism survive in its environment?

- A) Mutation
- B) Evolution
- C) Adaptation**
- D) Extinction