

Foundational Facts in Advanced Biology

Advanced Biology · Answer Key · 25 Questions

1. What is the primary function of chlorophyll in plants?

- A) To attract pollinators
- B) To absorb sunlight for photosynthesis**
- C) To transport water from roots to leaves
- D) To defend against herbivores

2. Which of the following is the largest mammal on Earth?

- A) African Elephant
- B) Great White Shark
- C) Blue Whale**
- D) Giant Squid

3. What process do fungi primarily use to obtain nutrients?

- A) Photosynthesis
- B) Ingestion
- C) Absorption**
- D) Chemosynthesis

4. Which gas is most abundant in Earth's atmosphere?

- A) Oxygen
- B) Carbon Dioxide
- C) Nitrogen**
- D) Argon

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

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

6. Which biome is characterized by permafrost and low-growing vegetation?

- A) Tropical Rainforest
- B) Desert
- C) Tundra**
- D) Savanna

7. What is the process by which plants release water vapor into the atmosphere?

- A) Respiration
- B) Transpiration**
- C) Evaporation
- D) Condensation

8. Which of these is a producer in a typical ecosystem?

- A) Lion
- B) Grass**
- C) Wolf
- D) Fungi

9. What is the term for the total number of different species in a given area?

- A) Ecological Succession
- B) Biotic Potential
- C) Biodiversity**
- D) Carrying Capacity

10. Which organelle is responsible for cellular respiration and energy production in eukaryotic cells?

- A) Nucleus
- B) Ribosome
- C) Mitochondrion**
- D) Endoplasmic Reticulum

11. What is the primary role of decomposers in an ecosystem?

- A) To produce oxygen
- B) To break down dead organic matter**
- C) To hunt prey
- D) To photosynthesize

12. Which bird species is known for its ability to mimic sounds?

- A) Ostrich
- B) Penguin
- C) Parrot**
- D) Eagle

13. What is the process by which organisms change over time?

- A) Adaptation
- B) Evolution**
- C) Migration
- D) Hibernation

14. Which layer of Earth's atmosphere is closest to the surface?

- A) Stratosphere
- B) Mesosphere
- C) Thermosphere

D) Troposphere

15. What is the main function of the circulatory system in animals?

- A) Digestion of food

B) Transport of oxygen and nutrients

- C) Protection from pathogens
- D) Waste removal from muscles

16. Which type of microorganism is often responsible for causing diseases like the flu?

- A) Bacteria
- B) Fungi

C) Viruses

- D) Protozoa

17. What is the name for the process where a solid changes directly into a gas?

- A) Melting
- B) Evaporation

C) Sublimation

- D) Condensation

18. Which of these is a characteristic feature of reptiles?

- A) Feathers

B) Scales

- C) Fur
- D) Gills

19. What is the natural movement of water from a higher concentration to a lower concentration across a semipermeable membrane?

- A) Diffusion

B) Osmosis

- C) Active Transport
- D) Filtration

20. Which plant hormone promotes fruit ripening and flower development?

- A) Auxin
- B) Gibberellin
- C) Cytokinin

D) Ethylene

21. What is the scientific study of rocks and minerals called?

- A) Archaeology
- B) Geology**
- C) Botany
- D) Zoology

22. Which desert animal is known for its ability to store fat in its hump?

- A) Kangaroo
- B) Lion
- C) Camel**
- D) Ostrich

23. What is the term for the gradual increase in Earth's average temperature?

- A) Acid Rain
- B) Ozone Depletion
- C) Global Warming**
- D) Desertification

24. Which insect is known for its role in pollination and producing honey?

- A) Ant
- B) Butterfly
- C) Bee**
- D) Grasshopper

25. What process allows plants to convert light energy into chemical energy?

- A) Respiration
- B) Fermentation
- C) Photosynthesis**
- D) Decomposition