

Environmental Science Fundamentals

Environmental Science · Practice Test · 25 Questions

1. Which gas currently accounts for the highest percentage of Earth's atmosphere by volume?

- A) Oxygen
- B) Argon
- C) Nitrogen
- D) Carbon dioxide

2. What is the primary process by which nitrogen is converted into a form that plants can use?

- A) Nitrogen fixation
- B) Denitrification
- C) Photosynthesis
- D) Transpiration

3. Which layer of the atmosphere contains the ozone layer that absorbs ultraviolet radiation?

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

4. What is the term for the maximum population size of a species that an environment can sustain indefinitely?

- A) Biotic potential
- B) Carrying capacity
- C) Environmental resistance
- D) Growth rate

5. Which biome is characterized by low precipitation, extreme temperatures, and vegetation adapted to conserve water?

- A) Tundra
- B) Taiga
- C) Desert
- D) Savanna

6. What is the primary cause of ocean acidification?

- A) Increased solar radiation
- B) Absorption of atmospheric carbon dioxide
- C) Plastic pollution
- D) Eutrophication

7. Which of the following is a non-renewable energy source?

- A) Geothermal
- B) Biomass
- C) Natural gas
- D) Wind

8. In an energy pyramid, approximately how much energy is transferred to the next trophic level?

- A) 10%
- B) 25%
- C) 50%
- D) 90%

9. Which phenomenon is responsible for the seasonal changes on Earth?

- A) Distance from the sun
- B) Earth's axial tilt
- C) Ocean currents
- D) Volcanic activity

10. What is the main driver of the greenhouse effect?

- A) Absorption of infrared radiation by gases
- B) Reflection of light by clouds
- C) Cooling of the Earth's crust
- D) Photosynthetic activity

11. Which process involves the breakdown of organic matter by decomposers in the absence of oxygen?

- A) Aerobic respiration
- B) Anaerobic decomposition
- C) Nitrogen cycling
- D) Sedimentation

12. What is the primary source of phosphorus in the natural phosphorus cycle?

- A) Atmospheric gas
- B) Weathering of rocks
- C) Biological nitrogen fixation
- D) Volcanic eruptions

13. Which type of resource can be replenished by natural processes at a rate comparable to its rate of consumption?

- A) Fossil fuel
- B) Renewable resource
- C) Non-renewable resource
- D) Inexhaustible mineral

14. What does the term 'biodiversity' primarily refer to?

- A) The total mass of all organisms in an ecosystem
- B) The variety of life in a particular habitat or ecosystem
- C) The number of predators in a food chain
- D) The rate of extinction of species

15. Which soil horizon is primarily composed of organic matter, such as decaying leaves and twigs?

- A) A horizon
- B) B horizon
- C) C horizon
- D) O horizon

16. What is the main environmental impact of the over-application of synthetic fertilizers in agriculture?

- A) Increased soil acidity
- B) Eutrophication of waterways
- C) Ozone depletion
- D) Desertification

17. Which gas is a significant byproduct of livestock agriculture and contributes to global warming?

- A) Methane
- B) Sulfur dioxide
- C) Argon
- D) Helium

18. What is a watershed?

- A) A large artificial dam
- B) An area of land where all water drains into a common outlet
- C) A type of desalination plant
- D) A deep underground aquifer

19. Which treaty was designed to phase out the production of substances that deplete the ozone layer?

- A) Kyoto Protocol
- B) Paris Agreement
- C) Montreal Protocol
- D) Basel Convention

20. What is the primary purpose of an Environmental Impact Assessment (EIA)?

- A) To increase industrial output
- B) To predict and mitigate potential environmental damage from projects
- C) To promote international tourism
- D) To manage municipal waste collection

21. Which of these describes an r-selected species?

- A) Produces few offspring with high parental care
- B) Produces many offspring with low parental care
- C) Reaches sexual maturity at a late age
- D) Has a stable population near carrying capacity

22. What process converts solar energy into chemical energy in producers?

- A) Respiration
- B) Photosynthesis
- C) Fermentation
- D) Transpiration

23. Which of the following is a primary greenhouse gas produced by volcanic eruptions?

- A) Oxygen
- B) Carbon dioxide
- C) Helium
- D) Neon

24. What is the main cause of the loss of habitat for many species in the Amazon rainforest?

- A) Natural forest fires
- B) Deforestation for agriculture and logging
- C) Sea level rise
- D) Invasive species introduction

25. What instrument is used to measure the intensity of earthquakes?

- A) Barometer
- B) Seismograph
- C) Anemometer
- D) Hygrometer