

Ecology Numerical and Historical Facts

Ecology · Practice Test · 25 Questions

1. In what year did Arthur Tansley first coin the term 'ecosystem' in his seminal paper?

- A) 1935
- B) 1942
- C) 1928
- D) 1950

2. Ernst Haeckel, who coined the term 'ecology' in 1866, derived it from which Greek word meaning 'house' or 'dwelling'?

- A) Oikos
- B) Bios
- C) Logos
- D) Ge

3. Approximately what percentage of the Earth's total water supply is considered fresh water available for human use?

- A) Less than 1%
- B) 5%
- C) 12%
- D) 20%

4. The Montreal Protocol, an international treaty designed to protect the ozone layer, was opened for signature in which year?

- A) 1987
- B) 1975
- C) 1992
- D) 1980

5. What is the approximate percentage of energy transferred from one trophic level to the next in a typical food chain, known as the 10% rule?

- A) 10%
- B) 25%
- C) 5%
- D) 50%

6. Rachel Carson's book 'Silent Spring', which catalyzed the modern environmental movement, was published in which year?

- A) 1962
- B) 1955
- C) 1970
- D) 1968

7. As of the 2020 IUCN Red List assessment, roughly how many species are documented as being at risk of extinction?

- A) 30,000+
- B) 10,000+
- C) 50,000+
- D) 5,000+

8. The Kyoto Protocol, a treaty that committed state parties to reduce greenhouse gas emissions, was adopted in what year?

- A) 1997
- B) 1992
- C) 2005
- D) 2010

9. How many global 'biodiversity hotspots' have been identified by Conservation International?

- A) 36
- B) 12
- C) 50
- D) 25

10. The atmospheric concentration of carbon dioxide first exceeded 400 parts per million (ppm) in which year according to the Mauna Loa Observatory?

- A) 2013
- B) 1990
- C) 2005
- D) 2020

11. What is the pH level threshold generally used to define 'acid rain' in natural precipitation?

- A) Below 5.6
- B) Below 7.0
- C) Below 4.0
- D) Below 6.5

12. The Endangered Species Act was signed into law in the United States by President Richard Nixon in what year?

- A) 1973
- B) 1965
- C) 1980
- D) 1970

13. What is the standard name for the numerical measure of species diversity within a single habitat, often represented by Simpson's index?

- A) Alpha diversity
- B) Beta diversity
- C) Gamma diversity
- D) Delta diversity

14. The 'Great Pacific Garbage Patch' covers an estimated area of approximately how many million square kilometers?

- A) 1.6
- B) 0.5
- C) 3.2
- D) 5.0

15. In population ecology, the letter 'K' in the logistic growth equation ($\frac{dN}{dt} = rN(1-N/K)$) represents what specific value?

- A) Carrying capacity
- B) Intrinsic growth rate
- C) Population density
- D) Death rate

16. How many mass extinction events are recognized in the Earth's geological history?

- A) 5
- B) 3
- C) 7
- D) 10

17. The 'Keeling Curve' is a graph that plots the ongoing change in the concentration of which gas in Earth's atmosphere?

- A) Carbon dioxide
- B) Methane
- C) Nitrous oxide
- D) Oxygen

18. What is the maximum number of trophic levels typically found in a standard terrestrial food chain due to energy loss?

- A) 4-5
- B) 2-3
- C) 8-10
- D) 15+

19. The first Earth Day was celebrated on April 22 of which year?

- A) 1970
- B) 1965
- C) 1975
- D) 1980

20. How much of the Earth's surface is currently covered by tropical rainforests?

- A) Less than 7%
- B) 25%
- C) 15%
- D) 20%

21. Garrett Hardin published his famous essay 'The Tragedy of the Commons' in which year?

- A) 1968
- B) 1960
- C) 1975
- D) 1982

22. What is the average residence time of a water molecule in the atmosphere?

- A) 9-10 days
- B) 30 days
- C) 1 year
- D) 6 months

23. The 'Red List' of threatened species is maintained by which international organization?

- A) IUCN
- B) WWF
- C) UNEP
- D) Greenpeace

24. Approximately how many species are estimated to be discovered and described by scientists globally to date?

- A) 1.2 to 2 million
- B) 500,000
- C) 10 million
- D) 50 million

25. The 'Biosphere 2' project, an earth system science research facility, began its first closed-system experiment in which year?

- A) 1991
- B) 1985
- C) 1995
- D) 2000