

MY SO PRACTICE TEST

DIVISION C - HIGH SCHOOL, GRADES 9-12

PRACTICE TEST

Instructions

- You have 50 minutes to complete this test.
- You may write your answers directly in the test.
- You may use any notes or resources you have created or collected.
- You may use a calculator and scratch paper if necessary.
- Good Luck!

Test Questions

1. Of the following organisms, which occupies the lowest trophic level?
 - a. Deer
 - b. Hawk
 - c. Snake
 - d. Spider
2. Which of the following is a density-independent limiting factor?
 - a. Disease
 - b. Emigration
 - c. Flood
 - d. Parasitism
3. Which of the following is true?
 - a. Because eagles grow to larger size than bacteria they have a J-shaped growth
 - b. Eagles are r-selected species, while bacteria are usually K-selected species
 - c. The growth curve of bacteria is never constrained by K
 - d. Under ideal conditions, bacteria and eagle populations both grow exponentially
4. A country has a population of 100 million in 2014 and an annual growth rate of 3.5 percent. Approximate the year the population will reach 400 million. Assume the growth rate remains constant.
 - a. 2019
 - b. 2034
 - c. 2054
 - d. 2119

5. On the slopes of the Carolina Appalachian Mountains, ecologists have studied some closely related plethodontid salamander species for decades. Many of these salamander species, when they occur in separate valleys from each other, tend to have very similar food size choices. However, when these species occur together in a mountain valley, their food choices tend to differ, with some species selecting small insects and others feeding exclusively on larger insects. This may be an example of
- competitive exclusion
 - habitat fragmentation
 - mutualism
 - resource partitioning
6. Two species of aster can be found in a field in New York, and they tend to flower at the same approximate time in early spring. When some ecology students decide to conduct an experiment in community dynamics, they selectively remove one species from the field by handpicking all plants of that species. When one species is removed, the other species shows a significant increase in its population the next season. This study demonstrates
- interspecies competition
 - niche fragmentation
 - niche realignment
 - resource partitioning
7. Which of the following is NOT a requirement for reef formation?
- clear waters
 - good water circulation
 - high levels of nutrients
 - a solid structure for the base
8. The skeleton of hard coral is composed of
- calcium carbonate
 - calcium sulfate
 - magnesium carbonate
 - magnesium sulfate
9. This chemical is the largest contributor to Earth's greenhouse effect
- Carbon Dioxide
 - Chlorofluorocarbons
 - Oxygen
 - Water
10. Which of the following human activities is most closely associated with depletion of the stratospheric ozone layer?
- Agricultural irrigation
 - Disposal of refrigerators and air conditioners
 - Generation of electricity
 - Mining of coal
11. Which is most likely to create eutrophic areas?
- acid mine drainage
 - heavy metals
 - nitrates and phosphates
 - pharmaceuticals

12. The BOD measurement of a liter of healthy water was found to be 20 mg. The BOD measurement of a liter of more polluted water was 120 mg. Which of the following statements is correct?
- The healthy water consumed 6 times as much oxygen as the polluted water
 - The healthy water produced 6 times as much oxygen as the polluted water
 - The polluted water consumed 6 times as much oxygen as the healthy water
 - The polluted water produced 6 times as much oxygen as the healthy water
13. What is the primary source of hormones and pharmaceuticals in the environment?
- agriculture
 - landfills
 - residential
 - sewage
14. Exposure to this air pollutant will cause neurological damage
- Carbon dioxide
 - Lead
 - Nitrogen Oxide
 - Particulate Matter
15. Rain in the Eastern US has a pH of roughly
- 3.6
 - 4.6
 - 5.6
 - 6.6
16. The agreement that allowed for a reduction, and eventual elimination, of CFC production and use is
- The Clean Air Act
 - The Clean Skies Initiative
 - The Kyoto Protocol
 - The Montreal Protocol
17. Prevention approaches to global warming include all of the following, except
- reducing deforestation
 - reducing population growth
 - shifting from coal to natural gas
 - shifting from pork consumption to beef consumption
18. What is a way to remediate water containing high levels of arsenic?
- bioreactors
 - flocculation
 - reverse osmosis
 - sedimentation
19. This law is often called "Superfund", designed to identify and clean up abandoned hazardous waste dump sites
- Comprehensive Environmental Response Compensation and Liability Act
 - Endangered Species Act
 - Nuclear Waste Policy Act
 - Occupational Safety and Health Act

20. Initiated the phasing out of ozone depleting substances.
- Clean Air Act
 - Kyoto Protocol
 - Madrid Protocol
 - Montreal Protocol
21. Which of the following plants has a thick root system that absorbs and stores large amounts of water and helps hold the soil in place?
- grasses introduced from Europe
 - native prairie grasses
 - winter wheat introduced from Russia
 - corn developed by the native America
22. Plants that can withstand long, dry periods are said to be:
- cover crops
 - drought-resistant
 - fire-resistant
 - heat-tolerant
23. Which of the following was the least significant factor that contributed to the black blizzards during the 1930s?
- construction of roads and homes
 - grazing of large herds of cattle
 - heavy rains and strong winds
 - plowing of the land in preparation for planting wheat.
24. The federal agency that helps landowners to protect the land and water is the:
- Natural Resources Conservation Service
 - Save the Soil Coalition
 - Soil Conservation Agency
 - United States Geological Survey
25. Which of the following statements is true?
- Reducing erosion reduces water pollution.
 - Erosion is a natural process and the rate cannot be controlled.
 - Erosion decreases the productivity of the soil.
 - both A and C

ANSWER KEY

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|-----|----------|-----|----------|
| 1. | A | 15. | B |
| 2. | C | 16. | D |
| 3. | D | 17. | D |
| 4. | C | 18. | C |
| 5. | D | 19. | A |
| 6. | A | 20. | D |
| 7. | C | 21. | B |
| 8. | A | 22. | B |
| 9. | D | 23. | A |
| 10. | B | 24. | A |
| 11. | C | 25. | D |
| 12. | C | | |
| 13. | A | | |
| 14. | B | | |