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## ENVIRONMENTAL SCIENCE

(Formerly, Environment and Humanity: The Race to Save the Planet)

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### EXAM INFORMATION

This exam was developed to enable schools to award credit to students for knowledge equivalent to that learned by students taking the course. This exam covers topics such as ecological concepts, environmental impacts and conservation.

The exam contains 100 questions to be answered in 2 hours.

**Form Codes:** SR510, SQ510, SY510, SZ510

### CREDIT RECOMMENDATIONS

The American Council on Education's College Credit Recommendation Service (ACE CREDIT) has evaluated the DSST test development process and content of this exam. It has made the following recommendations:

**Area or Course Equivalent:** Environmental Science

**Level:** Lower-level baccalaureate

**Amount of Credit:** 3 Semester Hours

**Minimum Score:** 400

**Source:** [www.acenet.edu](http://www.acenet.edu)

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### EXAM CONTENT OUTLINE

The following is an outline of the content areas covered in the examination. The approximate percentage of the examination devoted to each content area is also noted.

- I. Ecological Concepts – 30%**
  - a. Ecosystems
  - b. Organism Relationships
  - c. Biodiversity
  - d. Trophic relationships (e.g. food chain; food web)
  - e. Energy flows and cycles
  - f. Biomes
  - g. Population biology
  - h. Evolution
  - i. Ecological succession
- II. Environmental Impacts – 25%**
  - a. Human population dynamics
  - b. Global climate change
  - c. Pollution – physical, chemical, and biological aspects
  - d. Agricultural
  - e. Industrial
  - f. Habitat destruction
  - g. Land degradation
- III. Environmental Management and Conservation – 25%**
  - a. Renewable and nonrenewable resources
  - b. Agricultural practices
  - c. Pesticides and pest control
  - d. Soil conservation and land use practices
  - e. Air pollution control
  - f. Water quality and supply
  - g. Wastewater treatment
  - h. Solid and hazardous waste

- i. Environmental risk assessment
- IV. Social Processes and the Environment – 20%**
- a. Environmental justice
  - b. Policy, planning and decision making
  - c. Global environmental governance
  - d. Differing culture and societal values
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## REFERENCES

Below is a list of reference publications that were either used as a reference to create the exam, or were used as textbooks in college courses of the same or similar title at the time the test was developed. You may reference either the current edition of these titles or textbooks currently used at a local college or university for the same class title. It is recommended that you reference more than one textbook on the topics outlined in this fact sheet.

You should begin by checking textbook content against the content outline provided before selecting textbooks that cover the test content from which to study.

Sources for study material are suggested but not limited to the following:

1. Withgott, Jay H; Laposata, Matthew. (2015). Essential Environment: The Science Behind the Stories, 5<sup>th</sup> Edition. Pearson.
  2. Spoolman, Scott; Miller, Tyler G. (2015). Living in the Environment, 18<sup>th</sup> Edition. Cengage Learning.
  3. Begon, Michael; Townsend, Colin R; Harper, John L. Ecology: From Individuals to Ecosystems, 4<sup>th</sup> Edition. Wiley
  4. Field, Barry C. (2016). Natural Resource Economics: An Introduction, 3<sup>rd</sup> Edition. Waveland Press
  5. Norton, George. (2014). Economics of Agricultural Development, 3<sup>rd</sup> Edition. Routledge.
  6. Hintz, John; Moore, Sarah A; Robbins, Paul. Environment and Society: A Critical Introduction, 2<sup>nd</sup> Edition. Wiley-Blackwell.
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## SAMPLE QUESTIONS

All test questions are in a multiple-choice format, with one correct answer and three incorrect options. The following are samples of the types of questions that may appear on the exam.

1. The primary factor that determines the location and kind of biomes is
  - a. climate
  - b. soil
  - c. altitude
  - d. latitude
2. The oceans play a key role in the recycling of carbon and oxygen because of the productivity of
  - a. fish
  - b. marine mammals
  - c. phytoplankton
  - d. zooplankton
3. Early human populations increased rapidly with the widespread adoption of which of the following practices?
  - a. Hunting
  - b. Fishing

- c. Farming
  - d. Herding
4. Concentrations of carbon dioxide, infrared energy, methane, and water vapor are major contributing factors to
    - a. thermal air inversion
    - b. the greenhouse effect
    - c. urban smog
    - d. acid rain
  5. Catalytic converters are used to remove chemicals that contribute to
    - a. lead poisoning
    - b. carbon dioxide asphyxiation
    - c. photochemical smog
    - d. chlorofluorocarbon (CFC) pollution
  6. Which of the following countries, with a total fertility rate of less than 2.0, is said to be at "zero population growth"?
    - a. Thailand
    - b. India
    - c. Zimbabwe
    - d. Sweden
  7. An oak tree is an example of which of the following?
    - a. Primary producer
    - b. Primary consumer
    - c. Secondary consumer
    - d. Decomposer
  8. Incomplete combustion in automobile engines releases which of the following into the atmosphere?
    - a. Radon
    - b. Carbon tetrachloride
    - c. Asbestos
    - d. Hydrocarbons
  9. The combined use of fertilizers, pesticides, and hybrid seeds to increase crop yields is characteristic of which of the following?
    - a. The green revolution
    - b. Subsistence farming
    - c. Sustainable yield agriculture
    - d. Agro-forestry
  10. Which of the following is used to describe all of the living and nonliving features of a given area?
    - a. Community
    - b. Ecosystem
    - c. Biome
    - d. Carrying capacity
  11. Recycling of resources is most critical for the conservation of which of the following?
    - a. Biomass
    - b. Food

- c. Minerals
- d. Wildlife

12. Which of the following statements is true about the near future of the biosphere?
- a. Human population will remain stable.
  - b. Coal will be the primary natural energy source.
  - c. The amount of food per person will remain constant.
  - d. Increased industrialization will not increase pollution.

Answers to sample questions:

1-A; 2-C; 3-C; 4-B; 5-C; 6- D; 7-A; 8-D; 9.A; 10-B; 11-C; 12-B