

Ecology Test Breakdown

Multiple Choice: 6 marks

Matching: 8 marks

Did you do your homework?: 4 marks

Short Answer: 27 marks

- Choose to answer any nine of ten three mark questions.

Long Answer: 13 marks

- 2 questions
 - 6 mark question
 - 7 mark question

Questions from the textbook that may help prepare you:

p. 21 #6, 10, 11

p. 35 #1, 2, 12, 13

p. 46 #7

p. 124 #4, 6, 8, 22, 23,

Study tips:

- Creating study notes will help you to organize the information from this unit, and help you to see connections between materials.
- Think of the bigger picture. What did we spend more time discussing as a class? What are some topics I can ask multistep questions about?
- Don't leave studying to the last minute. The best way to study is in small chunks leading up to the test. Cramming last minute is ineffective. Instead spend a little bit of time each night rereading your notes.
- Don't stress! While I want you to study and do well, this is only one of four unit tests.

Ecology Review Revisited

These are all concepts that may be covered on the test. You are responsible for everything in your notes, including homework assignments.

- 1) List the four spheres of the Earth. Be able to name and describe them.
- 2) Terrestrial vs. Aquatic Biomes. Know how to categorize and describe each.
- 3) Define ecosystem, abiotic, and biotic.
- 4) Define the following terms:
 - Producers, Herbivore, Carnivore, Omnivore, Decomposer, Scavenger, Parasite.
 - Understand their roles in a food chain.
- 5) Photosynthesis and cellular respiration. What are the equations for each? In which type of species does each process occur. What is meant by 'reciprocal process.'
- 6) What adds to population growth? What adds to population death? What is the equation for population growth?
- 7) What are limiting factors?
- 8) Be able to sketch the graph for carrying capacity.
- 9) What is the difference between closed and open populations?
- 10) List abiotic and biotic factors that may limit a species population.
- 11) Understand the structure of a food web vs. food pyramid. Be able to build one if given a list of species. Know and understand the role of quaternary consumer, tertiary consumer, secondary consumer, primary consumer, and producer.
- 12) What is more energy efficient for us to eat, plants or animals?
- 13) Define trophic level. What are some examples of different trophic levels?
- 14) What is meant by the term biogeochemical cycles?
- 15) Be able to recognize and discuss both the carbon and water cycle.
- 16) What two methods do we use to create usable nitrogen?
- 17) Contrast the process of nitrogen fixation and denitrification.
- 18) Plants and bacteria have a symbiotic relationship. Explain this concept.
- 19) What form is nitrogen in the atmosphere. What are usable forms of nitrogen?
- 20) Describe the carbon cycle. What are some examples of processes in the carbon cycle?
- 21) How may human factors affect the carbon cycle?
- 22) What is the difference between carbon sinks and carbon sources? Provide an example of each.
- 23) State the three categories of ecological relationships and examples for each.
- 24) What are the three types of symbiosis? Give examples for each.
- 25) State the first and second law of thermodynamics, and how they relate to ecology.
- 26) How much energy is lost between trophic levels?
- 27) Define sustainability. Why is sustainability so important in our world?
- 28) Define biodiversity. How is it measured?
- 29) What are five major causes of decreased biodiversity.
- 30) Define extinct, endangered, extirpated, threatened, and vulnerable.
- 31) Define pesticide.
- 32) What is DDT and how may it impact species?
- 33) Describe the term bioaccumulation. Use a diagram.

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- 34) What dangers do mercury have to species? Does it have a greater effect on aquatic or terrestrial ecosystems?
- 35) What are the four categories of water pollution? What test may we use to diagnose water pollution?
- 36) What is a carbon footprint and what factors may effect it?
- 37) What is meant by the term overexploitation?
- 38) What is an invasive species and how might it effect an ecosystem?
- 39) What is habitat fragment and how may it effect and ecosystem?
- 40) Outline soil composition. What is it made of?
- 41) What effects can soil erosion have on the environment?
- 42) Outline the processes involved in the development of soil.

Likely 1 mark questions.

Likely longer answer questions.