

Dynamics of Ecosystems Review 2

Part A – Multiple Choice

Note: Some questions have more than one correct response.

1. The ultimate source of energy in MOST ecosystems is the
 - A. plants.
 - B. sun.
 - C. wind.
 - D. cosmic forces.

2. Part of every ecosystem includes the living or _____ factors.
 - A. biotic
 - B. abiotic
 - C. detritus
 - D. transgenic

3. The role an organism plays within its community is its
 - A. habitat.
 - B. niche.
 - C. symbiosis.
 - D. carrying capacity.

4. A herbivore would occupy which trophic level?
 - A. first trophic level
 - B. second trophic level
 - C. third trophic level

5. In the carbon cycle, animals return carbon to the atmosphere by
 - A. fermentation.
 - B. photosynthesis.
 - C. respiration.
 - D. combustion.

6. Which of the following are responsible for fixing nitrogen in the nitrogen cycle?
- A. Cyanobacteria
 - B. Rhizobia
 - C. Parasites
 - D. Birds
 - E. Mushrooms
7. Populations tend to increase in numbers until their environment can no longer support their demand. The maximum number of individuals that can be supported in an environment is known as
- A. logistic growth.
 - B. carrying capacity.
 - C. sustainable development.
 - D. biodiversity index.
8. As the population reaches the carrying capacity, which of the following is predicted to happen?
- A. Population density will increase exponentially.
 - B. Population density will decrease exponentially.
 - C. Population growth rate will increase.
 - D. Population growth rate will level off.
9. Intraspecific competition occurs between
- A. members of the same species.
 - B. members of different species.
 - C. different communities.
 - D. tribes.
10. Which of the following would have a positive effect (i.e., increase) on a population?
- A. increased number of births
 - B. increased number of deaths
 - C. decreased immigration
 - D. increased immigration

11. Which of the following is a density-dependent factor?

- A. Fire
- B. Earthquake
- C. Drought
- D. Food supply

12. Which of the following is considered a density-independent factor for population growth?

- A. parasites
- B. food supply
- C. flood
- D. mating opportunities

Part B – Extended Answer

1. In a typical ecosystem the following plants and animals are found.

Humans	Cows	Mice	Hawks
Corn	Grass	Foxes	Worms

Draw a food web using these plants and animals and label the **producers**, **primary consumers**, and **secondary consumers**.

2. A substance must have certain properties before it could be considered hazardous to an ecosystem. What are these four properties?

3. Give two density-dependent factors and two density-independent factors that affect population growth.

Density-dependent	Density-independent
1.	1.
2.	2.