Chapter 11: The Role of Plants in Ecosystems Part 3

MULTIPLE RESPONSE

1. Which of the following things do plants need to conduct photosynthesis? Select all that apply.
   a. water
   b. sunlight
   c. carbon dioxide
   d. oxygen
   e. glucose

2. A red-tailed hawk eats a frog, which eats grasshoppers, which eat grass. A wild turkey eats a frog, and a human eats a wild turkey. Which organism or organisms occupy the fourth level of the food chain? Select all that apply.
   a. grass
   b. frog
   c. human
   d. hawk
   e. wild turkey

3. Complete the following sentence with all terms that apply. Plants use light energy from the Sun to
   a. conduct photosynthesis.
   b. conduct cellular respiration.
   c. conduct nitrogen fixation.
   d. transform glucose and oxygen into carbon dioxide and water.
   e. transform carbon dioxide and water into glucose and oxygen.

4. Which of the following is a part of the nitrogen cycle? Select all that apply.
   a. evaporation
   b. nitrogen fixation
   c. nitrogen in the atmosphere
   d. an animal eating a plant
   e. photosynthesis

5. Which of the following is part of the carbon cycle? Select all that apply.
   a. photosynthesis
   b. respiration
   c. evaporation
   d. osmosis
   e. fossil fuel combustion

6. How is use of a cover crop beneficial? Select all that apply.
   a. It helps keep topsoil from washing away.
   b. It adds nitrogen to the soil.
   c. It removes nutrients from the soil.
   d. It adds organic material to the soil.
   e. It can help maintain water quality in neighbouring bodies of water.

7. Which of the following are ecosystem services provided by plants? Select all that apply.
   a. filtering pollution
   b. fixing nitrogen
   c. providing a source of inspiration for artists
   d. acting as carbon sinks
   e. providing shade on a hot day

8. What is timber used for? Select all that apply.
   a. carpentry
   b. paper making
   c. to make clothes
   d. construction
   e. to make linen

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9. Which parts of the lady's slipper can be chopped up and used to treat toothache? Select all that apply.
   a. roots
   b. stem
   c. leaf
   d. flower
   e. stamen

10. Which of the following is associated with a monoculture? Select all that apply.
   a. varying the amounts of fertilizer in different parts of a plot
   b. a large corn field
   c. decreased crop yield
   d. a wheat field
   e. a variety of crops on the same plot of land

11. Select one or more choices to correctly complete the statement. Sustainable agriculture
   a. should be conducted only in Earth's tropical regions.
   b. may use green manure.
   c. always uses monoculture.
   d. involves compromising the ability of future generations to meet their needs.
   e. could involve managing pests naturally.

12. Which of the following people might work on a golf course? Select all that apply.
   a. a landscape technician
   b. an arborist
   c. farmer
   d. a horticulturalist
   e. farm manager

13. What activities are part of urban forest management? Select all that apply.
   a. pruning
   b. planting gardens in a city park
   c. researching a long-term tree management plan for a city, but not planting anything
   d. allowing non-native pests to kill a tree
   e. painting the sides of buildings with forest murals

14. Which of the following is an example of a sustainable action? Select all that apply.
   a. planting trees to replace those that have been cut for timber
   b. rapid growth of algae in a lake due to runoff of phosphorus from a farm
   c. using green manure on a farm
   d. paying farm workers very low wages to harvest coffee
   e. cutting down all members of a rare and valuable tree species to make a large profit

15. Which of the following is true of urban farming? Select all that apply.
   a. It improves city dwellers' access to fresh fruits and vegetables.
   b. It increases the distance between where crops are grown and where they are consumed.
   c. It decreases air quality.
   d. It creates a food desert.
   e. It may involve vertical farming.

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