

## 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

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.