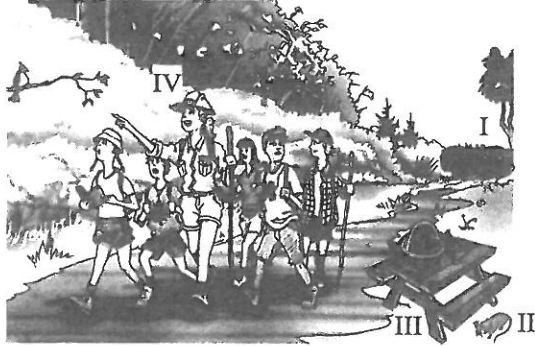


UNIT TEST—TREES AND FORESTS

Use the following information to answer the next question

Jasmine was asked to create a poster for her classroom. The poster needed to show many reasons why trees and forests are valued. While presenting her poster to the class, Jasmine asked the class to name the forest benefit represented at point I in the picture.



- Arjan correctly answered that at point I forests provide
 - an area for recreation
 - raw materials for construction and paper industries
 - natural ingredients that contribute to the advancement of medicine
 - shade and protection from direct sunlight and shelter from strong winds

Use the following information to answer the next question

Jasmine concluded her presentation by explaining that the most important benefit trees and forests have is found everywhere on Earth but cannot be credited to a specific area. She asked the class to state this very important benefit.

- Raoul correctly identified that the most important benefit of trees is they provide
 - food for everyone
 - oxygen for everyone
 - jobs for many people
 - homes for many animals

- Which of the following statements defines decomposers?
 - Decomposers are on-living things that reduce minerals and nutrients in the soil.
 - Decomposers are non-living things that increase minerals and nutrients in the soil.
 - Decomposers are living things that reduce the remains of living things to add nutrients of the soil.
 - Decomposers are living things that reduce the remains of non-living things to add minerals and nutrients to the soil.
- Organisms that are consumers are classified as
 - deciduous and coniferous
 - sunlight, air, soil and chemicals
 - maggots, beetles and earthworms
 - herbivores, carnivores and omnivores
- The forest layer where deer, skunks, and rabbits are animals found is the
 - forest floor layer
 - canopy layer of the forest
 - shrubby layer of the forest
 - understory layer of the forest



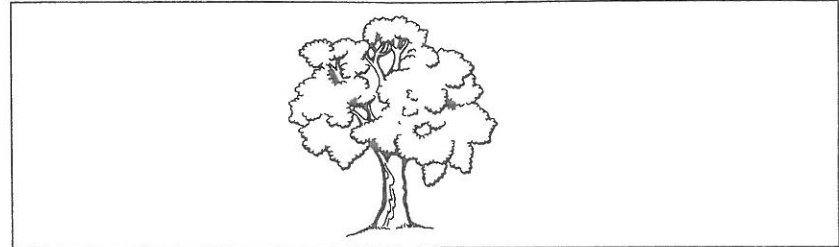
Use the following information to answer the next question.

The loss of even one species can ruin an entire forest ecosystem of plants and animals. The organisms that depended on this missing species as prey have now lost their food source. In turn, the organisms that it fed on have lost a predator.

- If robins were removed from a forest ecosystem, the initial impact on the forest would **most likely** be
 - an increase in the population of rabbits, followed by a decrease in the population of mice
 - a decrease in the population of rabbits, followed by an increase in the population of mice
 - an increase in the population of caterpillars, followed by a decrease in the number of poplar leaves
 - a decrease in the population of caterpillars, followed by an increase in the amount of poplar leaves

7. Choose the food chain that could exist in a forest.
- A. mouse → hare – lynx → deer
 - B. hare → coyote → deer → wolf
 - C. plants → hare → coyote → wolf
 - D. squirrel → grouse → coyote → deer
8. A forest is made up of four different layers. The layer that captures 90 % of the sunlight and is host to many flying animals is the
- A. shrubby layer
 - B. forest floor
 - C. understory
 - D. canopy
9. Mushrooms, conks and lichens are examples of
- A. fungi
 - B. bacteria
 - C. parasites
 - D. consumers
10. Producers, consumers and decomposers are linked in what is known as the
- A. animal cycle
 - B. energy cycle
 - C. nutrient cycle
 - D. chemical cycle
11. In a process called photosynthesis, trees use the energy from the sun to make their own food supply. During this process, trees release
- A. water vapour and take in oxygen
 - B. oxygen and take in water vapour
 - C. carbon dioxide and take in oxygen
 - D. oxygen and take in carbon dioxide

Use the following picture to answer the next question.



12. What would this type of tree be classified as?
- A. Deciduous tree
 - B. Coniferous tree
 - C. evergreen shrub
 - D. flowering shrub
13. A plant is classified as a tree if it has
- A. a woody stem
 - B. leaves or needles
 - C. leaves that change colour
 - D. roots that reach 3 metres in length

Use the following chart to answer the next three questions.

Type of Tree	Birch	Spruce	Poplar	Jack Pine	Elm
Well-known characteristic	White, paper-like bark	Shaped like a pyramid Used as a Christmas tree	Discharges many cottony seeds which are carried by the wind	Ragged-looking evergreen	Beautiful broad tree affected by Dutch Elm Disease
Area where tree grows best	The birch tree grows best in well-drained sandy loams. It does not tolerate shade, grows best along lakes, rivers.	The black spruce is the most widespread of the trees of the Northwest Territories. Likes wet, boggy conditions	Moist, rich low-lying ground, such as river valleys and flood plains. Does not tolerate shade.	The pine tree is the most widespread tree in Canada.	Very hardy tree able to weather severe winters. Until Dutch Elm Disease, this tree was a favourite in urban settings.
Growth type	Pioneer	Slow-growing evergreen	Fast-growing, short-lived tree	Pioneer	Can live up to 300 years
Leaf or needle type	Leaves are simple, round-shaped and have fine-toothed margins.	Four-sided needles, appear square in cross-section	Oval shaped leaves with fine-toothed margins	Needles that appear in pairs	Oval, toothed leaves
Common uses	In the past, these trees were used to make canoes.	Most common building wood in Canada	Making paper and firewood	In the past, the pine tree has been used to make teepees.	Used for making furniture and pianos

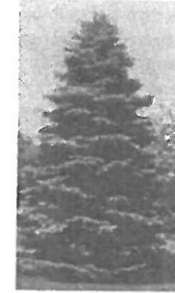
14. An example of a deciduous tree that is a pioneer species is the

- A. birch tree
- B. poplar tree
- C. spruce tree
- D. jack pine tree

Use the following pictures as additional information to answer the next question.



picture 1



picture 2

15. The tree shown in picture 1 is a

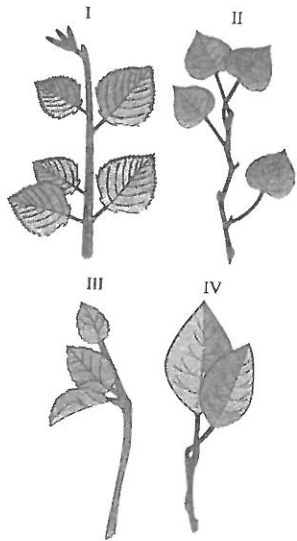
- A. birch tree
- B. spruce tree
- C. poplar tree
- D. jack pine tree

16. The deciduous tree that does not tolerate shade and is used to make paper is the

- A. elm tree
- B. spruce tree
- C. poplar tree
- D. jack pine tree

Use the following information to answer the next question.

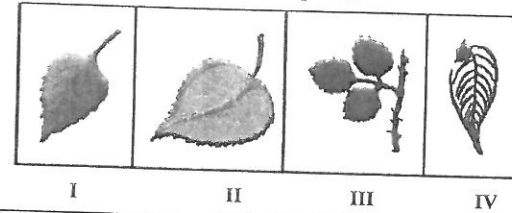
Karen and Danielle were working as Junior Forest Rangers for the summer. On a hike one day, the girls picked leaves from four different types of trees. When they returned from the hike, they numbered each of the samples and used the Junior Forest Ranger Guide to identify which type of tree each leaf came from.



17. Birch leaves are described as simple leaves with coarse teeth. The birch leaf is shown in box
- I
 - II
 - III
 - IV

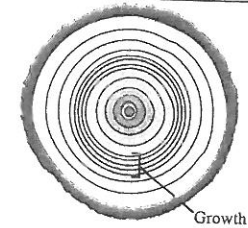
Use the following information to answer the next question.

Karen and Danielle were working as Junior Forest Rangers for the summer. The following pictures show the leaves that the girls picked from four plants. The girls used the Junior Forest Ranger Guide to identify the different plants.



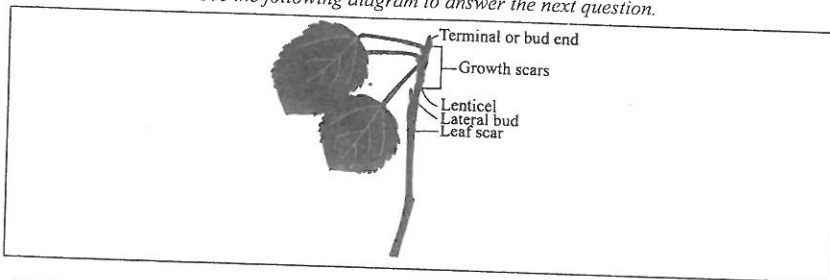
18. Rose leaves are described as having compound leaves with coarse teeth. Which of the given leaves **most likely** came from a rose bush?
- I
 - II
 - III
 - IV

Use the following diagram to answer the next question.



19. From the area indicated on the tree cookie above, it is likely that during these years the tree
- grew on a slope
 - was burned slightly
 - had some dead branches
 - experienced drought conditions

Use the following diagram to answer the next question.



20. New growth on trees can best be seen in the spring by looking at a tree's
- terminal or end bud
 - annual growth ring
 - leaf scar
 - lenticel

Use the following information to answer the next two questions.

James was researching the historical and modern uses of forests. By comparing forest use in the seventeenth century to the twenty-first century, James found many things had changed. He noted that forest use for shelters, leisure, and jobs had increased over time, while forest use for fuel and transportation had decreased.

21. James discovered that forest use for shelters had increased **mainly** because
- there are more people needing homes today
 - people live in larger homes today than they did in the past
 - log cabins have become more popular in the twenty-first century
 - many of today's campers know how to use temporary shelters made from trees
22. James inferred that the **main** reason forest use for fuel and transportation had decreased is that
- there are fewer demands for fuel and transportation needs today
 - better materials are now used for fuel and transportation demands
 - conservationists have banned the use of forests for these types of needs
 - clear cutting had reduced forests, thus reducing what they can be used for

Use the following information to answer the next two questions.

A small logging company employs one or two operators to cut trees with a chain saw. They select large trees, allowing smaller trees more space in which to grow. A horse may be used to drag the logs out of the bush because vehicles are too big to manoeuvre through the forest.

23. This logging technique is known as
- strip cutting
 - clear cutting
 - natural logging
 - selective cutting
24. Which of the following statements indicates that Canadians are taking action to enhance forests?
- Forestry industries employ over 800 000 Canadians.
 - Over 350 communities have economies that depend on forests.
 - Million hectares of forests in Canada are protected by law so they can remain in their natural state.
 - Hundreds of clear cutting projects are carried out today in all provinces of Canada.

Use the following information to answer the next three questions.

There was an outbreak of forest tent caterpillars in the town of Grantville. They were swarming the trees, eating the leaves, and dropping from trees onto the grass and onto people. The caterpillars became quite a concern for the people of the town. The mayor called a town meeting in the school gym to find out what residents felt should be done about the caterpillars.

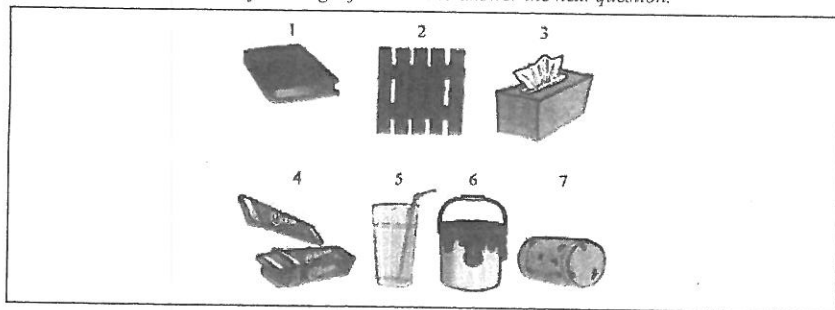


These are some of the residents' views.

- J. Schultz – Spray an insecticide from airplanes to eradicate the caterpillars so they do not damage expensive shrubs and trees. (An insecticide is a chemical that kills insects.)
- S. Cheng – The caterpillars do not hurt anyone, but chemical sprays damage the environment so just wait until the caterpillar infestation passes.
- E. McCabe – Spray insecticide near the edge of town, but not close to schools or playgrounds where there may be children playing.
- K. Tremblay – As a farmer, he did not want spraying at the edge of town since the chemical insecticide may affect his animals.
- G. Juba – She coaches kids soccer and wants spraying on all the fields so the caterpillars do not bother the kids while they are playing.

25. The resident that brings an economic reason to the discussion is
- J. Schultz
 - S. Cheng
 - E. McCabe
 - G. Juba
26. The resident that is concerned about the health effects of spraying on people is
- J. Schultz
 - E. McCabe
 - K. Tremblay
 - G. Juba
27. Which of the following attitudes would be **most important** if the residents are to agree about how best to approach the problem?
- Respect for each other's opinion
 - Confidence that their opinion is best
 - Ability to understand scientific concepts
 - Curiosity about how forest tent caterpillars grow

Use the following information to answer the next question.



28. Which of the objects shown in the given picture is **not** made from some part of a tree?
- 3
 - 4
 - 5
 - 7