

**OREGON ENVIROTHON 2022
FORESTRY TEST KEY**

TEAM# _____
TEST TOTAL _____/50 points

PART 1 Tree Identification and Forest Products (10 points)

- 1a.** Given the tree samples on the table, **write in the correct species of trees or shrubs using both common and scientific/Latin name.** (Spelling and Capitalization **MUST** be correct!) (6 points, (.5 points each))

	Common Name (.5 point each)	Scientific Name (.5 point each)
i.)	Sitka spruce	Picea sitchensis
ii.)	western juniper	Juniperus occidentalis
iii.)	ponderosa pine	Pinus ponderosa
iv.)	bigleaf maple	Acer macrophyllum
v.)	red alder	Alnus rubra
vi.)	Douglas-fir	Pseudotsuga menziesii

- 1b.** Oregon is a leader in manufacturing engineered wood. **List 2 examples of forest products produced in Oregon?** (2 points)

softwood lumber and plywood, hardwood lumber and plywood, engineered wood, composite wood, posts. poles, pulp and paper, millwork, biomass energy, etc.

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**PART 1 Tree Identification and Forest Products
(10 points) continued**

1c. List 2 of the three major forest certification systems used in Oregon? (2 points)

American Tree Farm System

Forest Stewardship Council

Sustainable Forestry Initiative

**PART 2 The Forest Practices Act and Forest Ecology
(10 points)**

Answer the following questions with respect to the Oregon Forest Practice Rules and Forest Ecology. (10 points)

2a. The Forest Practices Act lists three classes of wetlands. List the 3 classes? (3 points, 1 point each)

Significant

Stream associated

Other

2b. Reforestation is a key element to maintain future forests in Oregon. After a clear cut harvest on “HIGH” site class forestland, How many seedlings per acre need to be replanted? (1 point)

200 per acre

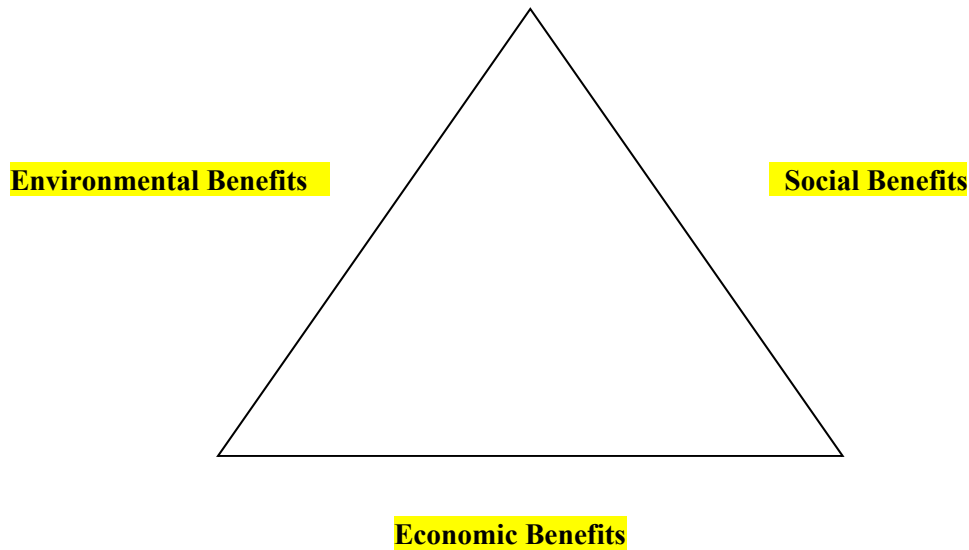
2c. Define “SSBT” as used in the Oregon Forest Practices Act? (1 point)

A stream with salmon, steelhead or bull trout present or otherwise used by salmon, steelhead, or bull trout at any time of the year as determined by the State Forester

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PART 2 The Forest Practices Act and Forest Ecology (10 points) cont.

2d. Complete the forest sustainability triangle, (label each side)? (3 points)



Sustainable Forestry Triangle

2e. Identify the plant pictured below. The bulb portion of the plant was an important food for native Americans who lived in Oregon. (2 points).



Camas

PART 3 Tree Measurements (12 points)

Directions: There are four trees marked with the letters A, B, C, D. By using the tool and information specified below, answer the following questions.

(answers to be filled in when trees chosen)

- 3a. Using the **Woodland Stick**, what is the Diameter (DBH) of Tree A?

_____ (inches) (3 points)

- 3b. Using a **Diameter or Loggers Tape**, what is the Diameter (DBH) of Tree B?

_____ (inches) (3 points)

- 3c. Using the **Woodland Stick**, what is the total height of Tree C given you are 100 feet from the base of the tree?

_____ (feet) (3 points)

- 3d. Using a **Clinometer**, what is the total height of Tree D given you are 100 feet away from the base of the tree?

_____ (feet) (3 points)

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PART 4 Forest Succession and Growth (10 points)

- 4a. Using the provided tree 'cookie' sample, answer the following questions.
(4 points, 1 point for each answer)

(answer- after specific tree cookie is chosen)

1. How old was this tree? _____ (2 points)

Count the rings-

2. From the tree cookie sample, were there any indicators that this tree was stressed?
Explain briefly your answer (1 point)

Multiple options-

3. Describe a forest management activity and/or silvicultural technique that could have improved the health of this tree. (1 point)

Multiple options-

4. Looking at the first 10 years of growth, describe what the forest surrounding this tree looked like at 10 years of age. (1 point)

Multiple options-

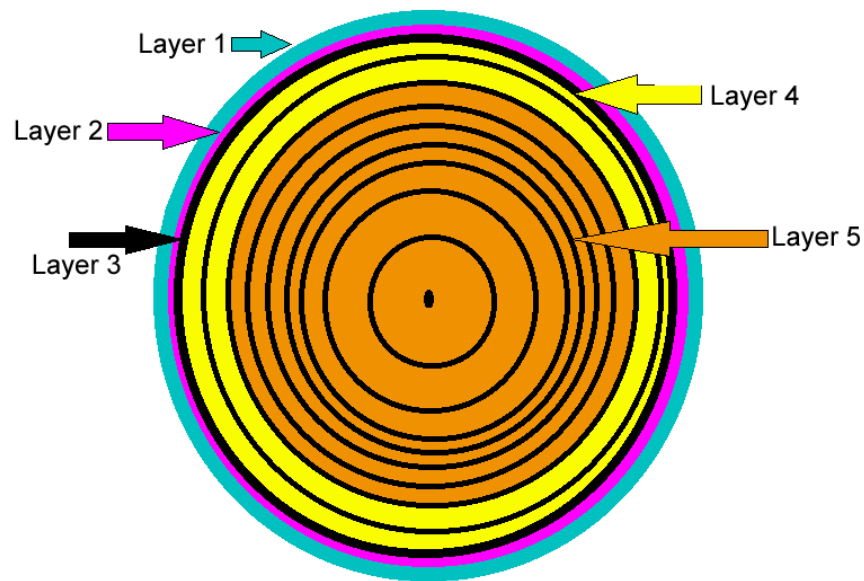
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PART 4 Forest Succession and Growth (10 points) continued

- 4c. Identify the points on the tree cross section (below). Write in the correct name of the part and its function. (5 points, .5 point for each answer)

	Name:	Function:
Layer 1-a)	bark	protects
Layer 2-b)	phloem	moves nutrients from leaves/needles
Layer 3-c)	cambium	new growth occurs
Layer 4-d)	Xylem/sapwood	moves water up from roots
Layer 5-e)	heartwood	structure

Cross-section of a Tree



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PART 5 Waste to Resources (8 points)

Using wood and wood waste

- 5a. Industry accounts for the majority of wood and wood-waste fuel consumption in the United States. **List one of the two largest industrial users of wood waste?** (2 points)

Wood products

Paper manufacturers

- 5b. We convert sources of energy to common units of heat. **What do we call these units?** (2 points)

British thermal units (Btu)

- 5c. In 2020, consumption of renewable energy in the United States grew for the fifth year in a row, reaching a record high. **List 4 types of renewable energy?** (4 points)

Wind, Solar, Hydroelectric, Wood waste, Biofuels

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