

**OREGON ENVIROTHON 2021  
FORESTRY TEST KEY**

TEAM# \_\_\_\_\_  
TEST TOTAL \_\_\_\_\_/50 points

**PART 1 Tree Identification and Forest Products (17 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 need to be correct!) (12 points, (1 point each))

**SEE ATTACHED: PHOTOS # 1-6**

Resource link: <https://oregonforests.org/content/tree-variety>

	Common Name (1 point each)	Scientific Name (1 point each)
1	Sitka spruce	Picea sitchensis
2	Pacific madrone	Arbutus menziesii
3	ponderosa pine	Pinus ponderosa
4	bigleaf maple	Acer macrophyllum
5	red alder	Alnus rubra
6	Douglas-fir	Pseudotsuga menziesii

**1b.** In reference to Fire in Oregon’s forests, List 2 examples of forest types in Oregon?

(2 points) Resource Link: [FOREST FACTS](#)

Dry Forests, Wet Forests and Southwestern Oregon Forests.

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

**1c.      I. What percent of Oregon is covered by forestland? (1 point)**

**47%**

**II. Name two types of forest products produced in Oregon's forests?**

(2 point, 1 point each)

**lumber, plywood, engineered wood, composite wood,**

**posts, poles, pulp, paper, millwork, biomass, etc.**

**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. Resource Link: [\*\*AN ILLUSTRATED MANUAL\*\*](#)

**2a.      The Oregon Forest Practices Act lists seven geographic regions for water protection.  
List 3 of geographic regions? (3 points, 1 point each)**

**Western Cascade, Coast Range, South Coast, Interior, Siskiyou, Eastern  
Cascade, Blue Mountain**

**2b.      One type of stream named in the Oregon Forest Practices Act is called SSBT.  
What do the letters SSBT stand for? (1 point)**

**Salmon Steelhead and Bull Trout.**

**2c.      Define the term "Prescribed Burning" as used in Oregon's Forest Protection Laws?  
(1 point)**

**The deliberate burning of wildland forest fuels under carefully managed conditions of  
weather, fuel moisture, wildfire hazard, proximity to designated populated areas and time  
of day.**

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

Resource Link: [no.01-06 - Field guide to the common diseases and insect pests of Oregon and Washington conifers - Biodiversity Heritage Library \(biodiversitylibrary.org\)](https://www.biodiversitylibrary.org/view/0106/seq-01/plate-01-06.pdf)

2d. List the 3 “True Mistletoe” diseases impacting Oregon’s conifer forests? (3 points)

Cypress-Juniper Mistletoe, Juniper Mistletoe, Incense-Cedar Mistletoe

2e. List two types of forest root diseases that can impact trees in Oregon? (2 points)

1. Laminated root rot, Armillaria root disease, Annosus root disease

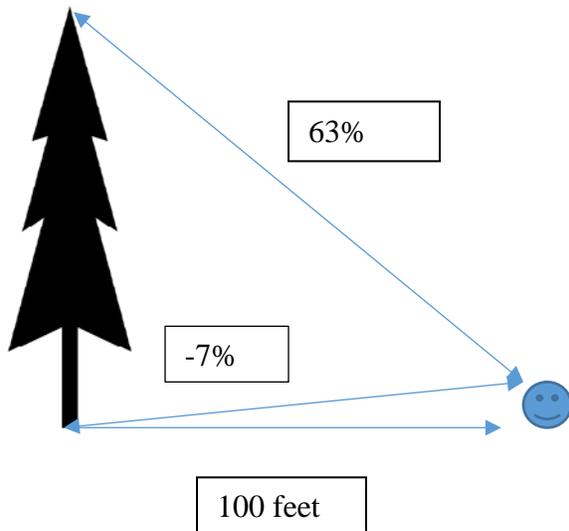
2. Black stain root disease, Port-Orford-cedar root disease

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**PART 3 Tree Measurements (3 points)**

Name a forestry tool that can be used to measure the height of a tree. (1 point)

clinometer, woodland stick, relaskop, laser range finder, hypsometer



If a forester using a clinometer recorded these measurements, **how tall is this tree?** (2 points)

70 feet

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**PART 4 Forest Succession and Growth (14 points)**

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

**SEE ATTACHED: PHOTOS #7**

1. How old was this tree? \_\_\_\_\_ (1 point)

25 years +/- 2 years

2. From the tree cookie sample, were there any indicators that this tree was stressed?  
**Describe** what may have stressed this tree? (1 point)

Appears this tree was not stressed in its lifetime. Plenty of food, water and minimal competition, as growth rings are very uniform.

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

Multiple options: PCT, Commercial thinning, fertilization, etc.

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)

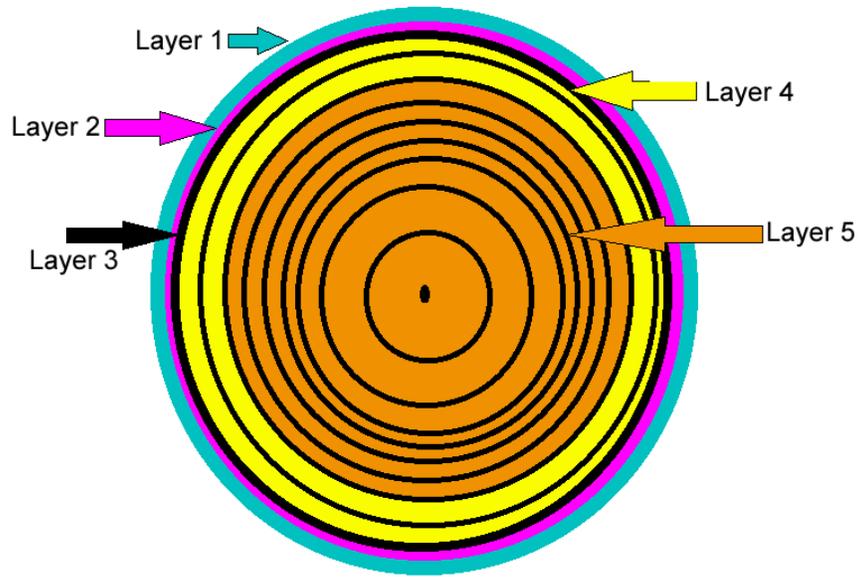
Trees are well spaced with basically no competition as growth rings are wide and show good growth.

**PART 4 Forest Succession and Growth (10 points) continued**

**4b.** Identify the points on the tree cross section (below). Write in the correct name of the part and its function. (10 points, 1 point each)

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

**Cross-section of a Tree**



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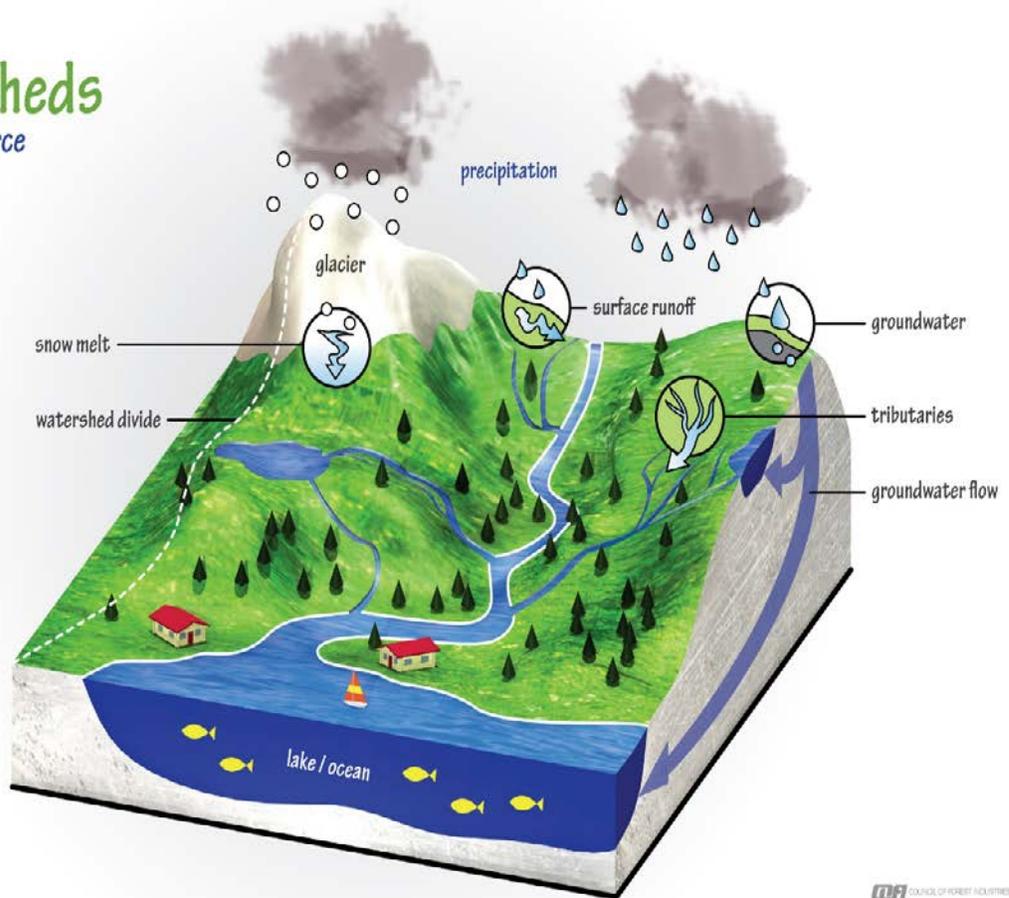
**PART 5**      **Water Resource Management: Local Control and Local Solutions**  
**(6 points)**

1. **Fill in the labels in the correct location.** (6 points, 1 point each)

**Snow melt, Precipitation, Surface runoff, Groundwater flow, Tributaries, Watershed divide**

**watersheds**  
our water source

-  snow melt
-  surface runoff
-  tributaries
-  groundwater



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