Name: ____ Chapter: ____________________
State: ____ Team No. ___________________
Member No. _________________

FORESTRY BUSINESS PROBLEM - **Key**
2017

Bill Linden, a local school teacher, purchased 50 acres of timberlands in Morgan County, Indiana on July 20, 2016. He paid $2600 per acre and his closing costs for the land purchase were $1200. He hired a forester, Laurel Wood, to provide him with an inventory and valuation of the merchantable timber on his property. Laurel charged Bill $1000 for the inventory, valuation, and a forest management plan. Below are the results of the inventory and valuation given on a per acre basis.

Species	**Board Feet (Doyle rule)**	**Stumpage value**
Tuliptree	1050	$367.50
Red Oak	800	$440.00
White Oak	770	$500.50
Hickory	725	$181.25
Sugar Maple	600	$270.00
Beech	560	$67.20
Elm	200	$24.00
Totals per acre	4705	$1850.45

1. What is the total value for timber on the 50 acres? 12 pts.
   a. $1850.45
   b. $91522.50
   c. $92522.50 1850.45 X 50
   d. $93522.50

2. What is the value per board foot for white oak? 12 pts.
   a. $0.55
   b. $0.65 500.50/770
   c. $500.50
   d. $1.54

3. What is the average value per board foot for all species? 12 pts.
   a. $0.29
   b. $0.39 1850.45/4705
   c. $2.54
   d. $1850.45

4. Bill asks Laurel to set up a cost basis account for his property purchase for tax management purposes. What is Bill's cost basis for this 50 acre purchase? 12 pts.
   a. $130,000
   b. $131,000
   c. $132,200 2600 X 50 = 130,000 + 1000 +1200
   d. $222,522.50

5. Laurel estimated that Bill's timber was increasing in value by 6% annually, accounting for both growth in volume and gain in unit value. What is the per acre value of the timber after three years of growth? 15 pts.
   a. $1961.48
   b. $2183.53
   c. $2203.92 1850.45 X 0.06 = 111.03+1850.45=1961.48 X 0.06=117.69+1961.48 =2079.17 X 0.06 = 124.75 + 2079.17 = 2203.92

6. After 10 years of growth, Bill now has 1020 board feet of white oak per acre. 15% of the white oak volume is now graded as veneer, worth $2.00 per board foot. The remaining 85% of the white oak volume is valued at $0.50 per board foot. What is the value of the white oak veneer for the 50 acres? 14 pts.
   a. $306
   b. $2040
   c. $15,300 1020 X 0.15 = 153 X $2 = $306 X 50 = $15300
   d. $21,675

7. Using the same information from question 6, what is the value per acre of all white oak? 13 pts.
   a. $306
   b. $433.50
   c. $739.50 1020 X .85 = 867 X $0.50 = $433.50 + $306 = $739.50
   d. $2040

8. Bill sold standing timber using a sealed-bid sale process for a lump-sum of $12,000 on August 20, 2017. Laurel charged Bill $1200 for marketing and administering the sale. Laurel calculated that Bill had $7800 of cost basis in the timber he sold. How much could Bill deduct from the proceeds of the sale for income tax calculating purposes? 10 pts.
   a. $0
   b. $1200
   c. $7800
   d. $9000 1200 + 7800