CSCI 1900 - Homework 18 - B

# Section 11.3: Tree Traversal *(10)*

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1. Using the above Huffman code tree, decode the following Huffman encoded bit strings: (4)

a) 1010001100 b) 110001 c) 0110000101 d) 1011101100

1. Using the above Huffman code tree, encode the following strings: (4)

a) TAN b) SEA c) NEAT d) STATE

1. Suppose the encoding in 1d), while being transmitted, suffers a transmission error such that bit five is changed from 1 to 0. How will the receiver decode the bit string? (1)
2. What does the result of question 3 tell you about using Huffman encoding? (1)

# Section 7.3: Tree Traversal *(9)*

**Tree 2**

**Tree 1**

1. Perform a pre-order traversal of **Tree 1**, where visit means record the vertex value. (1)
2. Perform an in-order traversal of **Tree 1**, where visit means record the vertex value. (1)
3. Perform a post-order traversal of **Tree 1**, where visit means record the vertex value. (1)
4. Perform a pre-order traversal of **Tree 2**, where visit means record the vertex value. (1)
5. Perform an in-order traversal of **Tree 2**, where visit means record the vertex value. (1)
6. Perform a post-order traversal of **Tree 2**, where visit means record the vertex value. (1)