

Reading Quiz #5

⚠ This is a preview of the published version of the quiz

Started: Feb 24 at 5:09pm

Quiz Instructions

Read section 4.8 in the textbook. If you didn't read both 4.2 and 4.3 last week, we recommend that you read the section you hadn't read (although the quiz won't ask about them).

Question 1

1 pts

Which of the following encodings of the letters A through F are *prefix* codes? Select all those that apply.

- ☐ A = 1, B = 011, C = 100, D = 101, E = 110, F = 111
- ☐ A = 0, B = 100, C = 101, D = 110, E = 1110, F = 1111
- ☐ A = 00, B = 01, C = 10, D = 101, E = 110, F = 111
- ☐ A = 001, B = 010, C = 011, D = 100, E = 101, F = 110.
- ☐ A = 00, B = 01, C = 10, D = 110, E = 11100, F = 11111

Question 2

1 pts

Consider the following prefix code for the letters A through F:

- A = 00
- B = 01
- C = 100
- D = 101
- E = 110
- F = 111

A secret message is encoded as

00101110001110111011011100100110101001110010111010111100100001011110.

What is its meaning in English (it's seven words):

Question 3

1 pts

Which of the following statements about the tree produced by Huffman's algorithm, that correspond to an optimal prefix code, are true? There may be more than one correct statement.

- ☐ Every node of the tree corresponds to a letter of the alphabet.
- ☐ The tree is constructed from the leaves up.
- ☐ The letter with the highest frequency is at the root of the tree.
- ☐ If a letter x is closer to the root of the tree than a letter y , then x 's frequency is either higher or the same as y 's frequency.
- ☐ If a letter x has higher frequency than a letter y , then x is closer to the root of the tree than y .

Not saved

Submit Quiz