

Write your name and code on the back.

Show your work!

1. { 10 points } **Given the coding scheme**

$a : 001$, $b : 0001$, $e : 10$, $i : 11$, $r : 0000$, $s : 0100$, $t : 011$, $x : 01010$

(a) **construct the binary tree representing it**

(b) **find the word represented by**

00011101110

(c) **find the word represented by**

0111001010011

(d) **encode the word**

treat