



United International University (UIU)

Dept. of Computer Science & Engineering (CSE)

Home Assignment 1

Course Code: CSE 2217

Total Marks: 05

1	$T(n) = 9T\left(\frac{n}{3}\right) + O(n)$ <p>Find the upper bound of this recurrence equation using (i) the master method (ii) the recursion tree method</p>	[3]												
2	<p>A file consists of only the letters A, B, C, D, E, F and it has a total of 1000 characters. Following are the percentage of occurrences of each letter.</p> <p>(i) Find out the optimal way to encode the file. (ii) How much bit do you save in comparison to the fixed-length encoding scheme?</p> <table><tr><td>A</td><td>0.30</td></tr><tr><td>B</td><td>0.30</td></tr><tr><td>C</td><td>0.13</td></tr><tr><td>D</td><td>0.12</td></tr><tr><td>E</td><td>0.10</td></tr><tr><td>F</td><td>0.05</td></tr></table>	A	0.30	B	0.30	C	0.13	D	0.12	E	0.10	F	0.05	[2]
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