



Bangladesh Army University of Engineering & Technology (BAUET)

Department of Computer Science and Engineering (CSE)

Course Title: Data Structure and Algorithms II Course Code: CSE-2213

2nd Year 2nd Semester CT-4 Summer-24

Marks: 15

Time: 30 Mins

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| <p>Q1. Construct the Huffman tree based on the frequency of each character in the given sentence.
Encode each character using the generated Huffman tree to obtain the binary representation.
Present the final binary code for the entire sentence. [CO-2, PO-2, C3, KP-3]</p> <p style="text-align: center;">"The quick brown fox jumps over the lazy dog."</p> | 5 |
| <p>Q2. Construct an expression tree for the expression $(a + b * c) + ((d * e + 1) * g)$. Identify the outputs when you apply preorder, inorder and postorder traversals.
[CO-2, PO-2, C3, KP-3]</p> | 5 |
| <p>Q3. Develop a splay tree for the given value 10, 7, 9, 17, 15, 13, 20, 30, 1, -1. After that perform search (-1) and delete (30) operation for that splay tree. [CO-2, PO-2, C3, KP-3]</p> | 5 |