

St. Mira's College for Girls, Pune
(Autonomous-Affiliated to Savitribai Phule Pune University)

Class-S.Y.B.Sc(C.S)
Subject: Data Structures and Algorithms-II
Subject Code:BS42001
Semester: IV
Year: 2021-22

All Units - focusing on Skill Development, Employability and Entrepreneurship

St. Mira's College for Girls
S.Y.B.Sc(C.S) Sem-4
Subject: Data Structures and Algorithms-II
Flexi Test-1 Marks-20
Date:05-02-2022

- Q.1 Attempt the following:(Any 5) (5x4=20 Marks)
- Write a C function to count the total number of leaf nodes of BST.
 - Sort the following data using heap sort:
23,56,77,18,44,12,10
 - Construct the Huffman codes for the following data:

Value	A	B	C	D	E	F
Frequency	5	25	7	15	4	12

- Write a C function to copy one tree into another tree.

05/02/2022
Saturday

Data Structure Test 1 (Sem 4) Name:-Renuka Deokan
6504

a. write a C function to count total number of leaf nodes of BST
→ Function

```
int leafcount(struct tree-node *root)
{
    static int leaf-cnt = 0;
    struct tree-node *temp = root;
    temp = root;
    IF (temp == NULL)
    {
        if ((temp->left == NULL) && (temp->right == NULL))
            leaf-cnt++;
        leafcount(temp->left);
        leafcount(temp->right);
    }
}
```

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