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COLLEGE ROLL NO. : 20191425

EXAM ROLL NO. : 19020570024

COURSE : B.SC.(H) CS

SEMESTER : 4th

Design and Analysis of Algorithm
PRACTICAL EXAM

Question 1 :

```
Enter your choice.
1.Insertion.
2.Deletion.
3.Search a number.
4.Display its preorder and inorder transversals.
5.Exit.
```

```
Preorder:

Element: 3        Color: Black
Element: 2        Color: Black
Element: 4        Color: Black
Element: 7        Color: Red
Inorder:

Element: 2        Color: Black
Element: 3        Color: Black
Element: 4        Color: Black
Element: 7        Color: RedPress any key to continue . . .
```

```
Enter number to be searched.
7

7color :redPress any key to continue . . .
```

```
Enter number to be deleted.
2
Press any key to continue . . .
```

```
V:\Naman_Jain\DAA\Red Black tree.exe

Preorder:

Element: 4          Color: Black
Element: 3          Color: Black
Element: 7          Color: Black
Inorder:

Element: 3          Color: Black
Element: 4          Color: Black
Element: 7          Color: BlackPress any key to continue . . .
```

● Question 2

```
V:\Naman_Jain\DAA\New folder\Prim's Algorithm.exe

Edge : Weight
0 ---> 5 :   10
5 ---> 4 :   25
4 ---> 3 :   22
3 ---> 2 :   12
2 ---> 1 :   16
1 ---> 6 :   14

--------------------------------
Process exited after 0.1135 seconds with return value 0
Press any key to continue . . .
```

● Question 3

```
Enter number of elements to be sorted:
4

Enter 4 elements to be sorted:
2 6 3 1

Enter the sorting technique to be used
 1. Bubble Sort
 2. Selection Sort
 3. Insertion Sort
 4. Merge Sort
 5. Quick Sort
1

Sorted array is:1 2 3 6
No of Comparisions : 4
-------------------------------
Process exited after 9.661 seconds with return value 0
Press any key to continue . . .
```

```
Enter number of elements to be sorted:
4

Enter 4 elements to be sorted:
2 6 3 1

Enter the sorting technique to be used
 1. Bubble Sort
 2. Selection Sort
 3. Insertion Sort
 4. Merge Sort
 5. Quick Sort
2

Sorted array is:1 2 3 6
No of Comparisions : 4
-------------------------------
Process exited after 6.49 seconds with return value 0
Press any key to continue . . .
```

```
Enter number of elements to be sorted:
4

Enter 4 elements to be sorted:
2 6 3 1

Enter the sorting technique to be used
 1. Bubble Sort
 2. Selection Sort
 3. Insertion Sort
 4. Merge Sort
 5. Quick Sort
3

Sorted array is: 1 2 3 6
No of Comparisions : 4
-------------------------------
Process exited after 10.31 seconds with return value 0
Press any key to continue . . .
```

```
Enter number of elements to be sorted:
4

Enter 4 elements to be sorted:
2 6 3 1

Enter the sorting technique to be used
 1. Bubble Sort
 2. Selection Sort
 3. Insertion Sort
 4. Merge Sort
 5. Quick Sort
5

sorted array is:
 1 2 3 6
Total number of comparisons are: 3
-------------------------------
Process exited after 5.722 seconds with return value 0
Press any key to continue . . .
```

```
Enter number of elements to be sorted:
4

Enter 4 elements to be sorted:
2 6 3 1

Enter the sorting technique to be used
 1. Bubble Sort
 2. Selection Sort
 3. Insertion Sort
 4. Merge Sort
 5. Quick Sort
4

sorted array is:
 1 2 3 6
Total number of comparisons are: 5
--------------------------------
Process exited after 14.45 seconds with return value 0
Press any key to continue . . .
```