

# PRACTICAL EXAMINATION 2020-21

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Design Analysis of algorithm

## Question 1: output

```
C:\Users\dell\Downloads\Red_black_tree.exe
Enter your choice.
1.Insertion.
2.Deletion.
3.Search a number.
4.Display its preorder and inorder transversals.
5.Exit.
_
```

```
C:\Users\dell\Downloads\Red_black_tree.exe
Enter the number to be inserted in tree.
6_
```

```
C:\Users\dell\Downloads\Red_black_tree.exe
Enter your choice.
1.Insertion.
2.Deletion.
3.Search a number.
4.Display its preorder and inorder transversals.
5.Exit.
3_
```

```
C:\Users\dell\Downloads\Red_black_tree.exe
Enter number to be searched.
6_
```

```
C:\Users\dell\Downloads\Red_black_tree.exe
Enter number to be searched.
6
6color :redPress any key to continue . . . _
```

## Question 2: output

```
C:\Users\dell\Downloads\minimum_spanning_tree.exe
The edges in the given graph are::
< 1 , 2 > 2
< 1 , 3 > 4
< 1 , 4 > 6
< 2 , 3 > 7
< 2 , 4 > 3
< 3 , 4 > 4

After sorting the edges in the given graph are::
1 , 2 > ::2
2 , 4 > ::3
1 , 3 > ::4
3 , 4 > ::4
1 , 4 > ::6
2 , 3 > ::7

***** THE MINIMUM SPANNING TREE IS*****The edge included in MST is :: < 1 , 2 >
The edge included in MST is :: < 2 , 4 >
The edge included in MST is :: < 1 , 3 >
Edge < 3 , 4 > is not included as it forms a cycle

Edge < 1 , 4 > is not included as it forms a cycle

Edge < 2 , 3 > is not included as it forms a cycle

-----
Process exited after 25.21 seconds with return value 0
Press any key to continue . . .
```

## Question 3: output

C:\Users\dell\Documents\sorting with comparision.exe

insertion sort:--

Comparisons : 9

1 2 4 5 6 10

merge sort :--

comparsion :23

Array after Sorting

3

5

7

9

10

11

12

13

16

24

bubble sort :--

comparision:-17

Sorted array:

64 25 34 12 22 11 90

selection sort :--

no.of comparision:-9

Sorted array:

0 64 25 12 11

Quick sort :--

no. of comparision:--1

sorted array1

5

7

8

9

10

Process exited after 0.1521 seconds with return value 0

Press any key to continue . . .