

# 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 . . .
```

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