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Section: 'C'

Mid Term

QNo 1

(a)

Sol:-

This is false because $O(1)$
A algorithm is said to run in
constant time if it requires the
same amount of time regardless
of the input size.

Ans.

b) $O(n^2 \log n)$ is faster than
$O(o^{2.1})$

Ans

This is true, Because $O(n^2 \log n)$ is much closer to
$O(n)$ than to $O(n^{2.1})$

QNo 2

Sol:- $O(2^5)$ $O(\log n)$ $O(n \log n)$
$O(3(\log n))$ $O(n(\log n)^2)$
$O(n^{34})$ $O(1.1n)$

Ans-

QNo 3

a)

Ans: $O(n*n)$
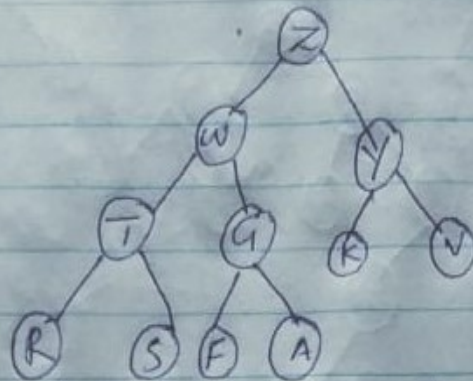
b)

Ans: $O(n \log n)$
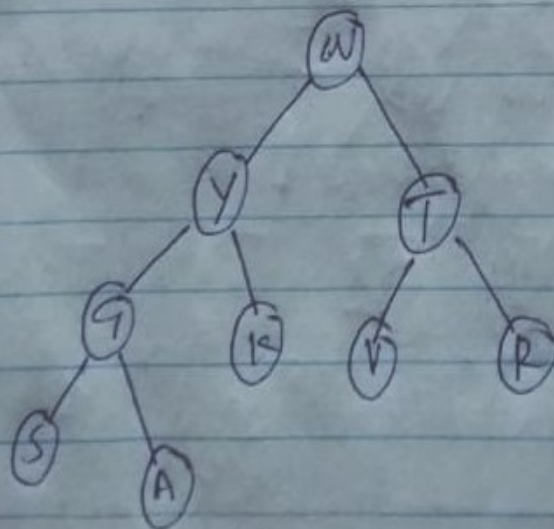
c)

Ans: $O(n \log n)$

d)

Ans: $O(n^2 \log n)$

Q NO 4

0	1	2	3	4	5	6	7	8	9	10	11	12	13
—	Z	W	Y	T	G	K	V	R	S	F	A	—	—

Sol:.

The delete min. value delete
from it then show

Array

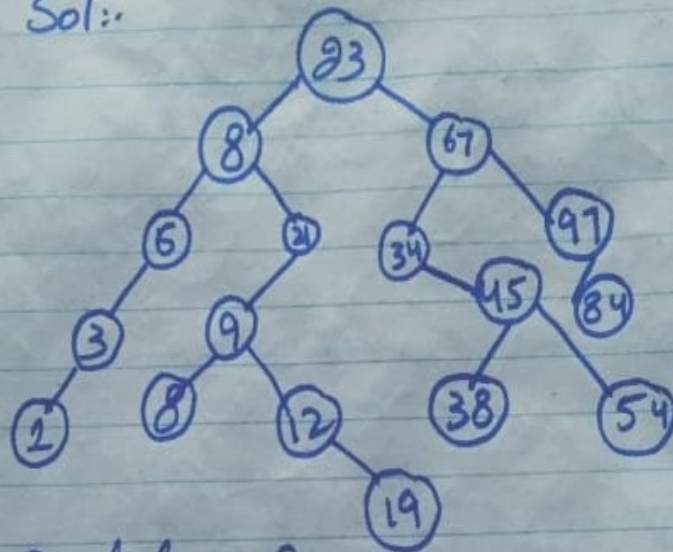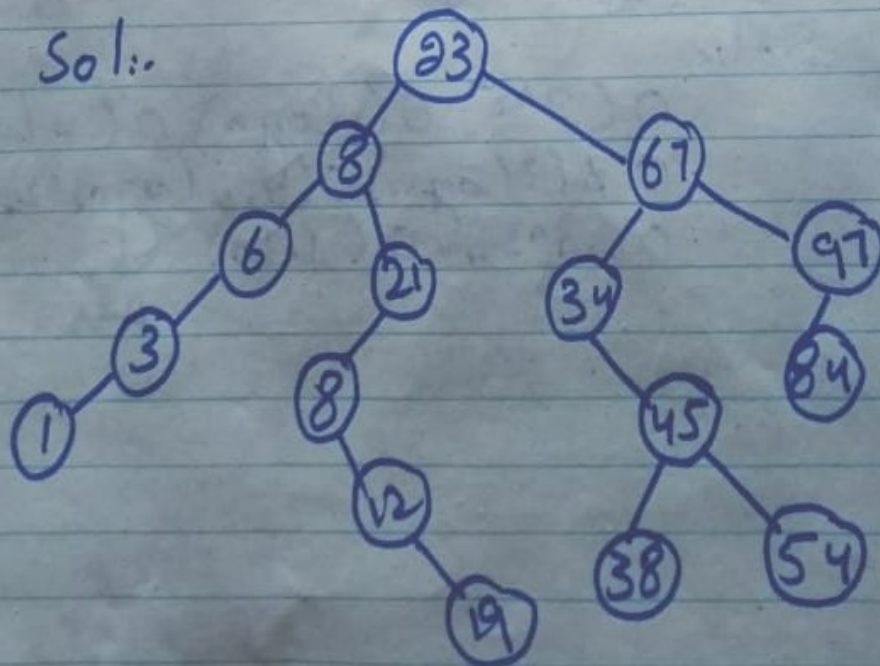| 2	3	4	5	6	7	8	9	10	11	12
W	Y	T	G	K	V	R	S	A	—	—

QNO 5

23, 67, 8, 977, 21, 34, 6, 3, 1
9, 45, 8, 38, 54, 12, 19, 84

Sol:-

a) Delete 9

Sol:-

b) Add __18__

Sol:-

```
                              23
                  8                       67
             6         21            34        97
          3          8             45      84
        1          12            38    54
                      19
                    18
```