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ID :- 2020-1-60-149.

Ans to the Q.No: 6

(6) 10, 20, 30, 40, 50

(10)

Fig-1

(10)

(20)

Fig-2

(10) [E2]

(20)

(30)

Fig-3

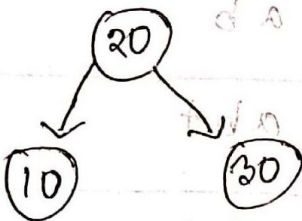


Fig-4

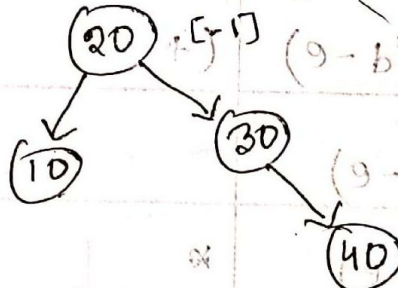


Fig-5

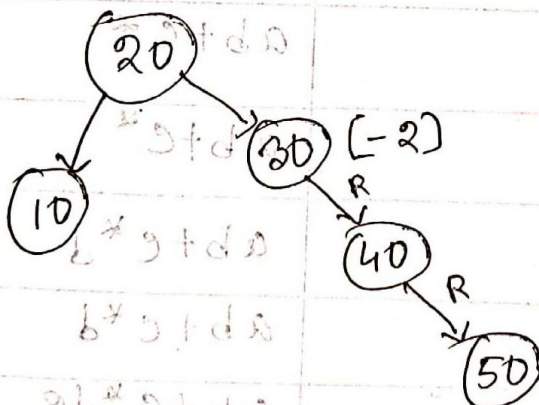


Fig-6

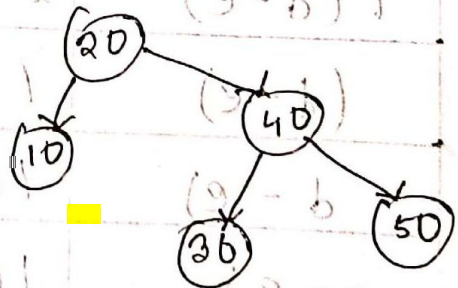


Fig-7

(Ans)

Ans to the Q.No: 1

$$(a+b)^*c/(d-e)$$

infix	stack	postfix
$(a+b)^*c/(d-e)$		
$a+b)^*c/(d-e)$	(
$+b)^*c/(d-e)$	(a
$b)^*c/(d-e)$	(+	a
$)^*c/(d-e)$	(+	ab
$*c/(d-e)$	*	ab+
$c/(d-e)$	/	ab+c
$/(d-e)$	/	ab+c*
$d-e)$	(ab+c*
$-e)$	(ab+c*d
$e-)$	(-	ab+c*d
$)$)	ab+c*d
		ab+c*d-e

ab+c*de-1

(Ans)

Ans to the Q.No:2

②

Given,

$$ABC+D^*EF+1$$

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$$A=2, B=2, C=1, \cancel{A=6} D=6, E=1, F=4$$

Postfix

Stack

$$2\ 2\ 1\ +\ -\ 6\ *\ 1\ 4\ +\ 1$$

$$2\ 2\ 1\ +\ -\ 6\ *\ 1\ 4\ +\ 1$$

$$1\ +\ -\ 6\ *\ 1\ 4\ +\ 1$$

$$+\ -\ 6\ *\ 1\ 4\ +\ 1$$

$$-\ 6\ *\ 1\ 4\ +\ 1$$

$$\cancel{2\ 1\ 6\ +\ +}$$

$$\cancel{1\ 6\ +\ +}$$

2

2 2

2 2 1

2 3

~~2 3 6~~

~~2 1 8~~

6 * 14 + 1

8 14 + 1

14 + 1

4 + 1

+ 1

1

-1

-1 6

-6

-6 1

1019 14 6

1019 14 6

1019 14 6

1019 14 6

1019 14 6

1019 14 6

1019 14 6

1019 14 6

1019 14 6

1019 14 6

Ans to the Q.No: 5

⑤

Using

```
void balance() {
```

```
    stack <<char> s;
```

```
    string p;
```

```
    cin >> p;
```

```
    int cons = 0;
```

```
    for(int i = 0; i < p.length(); i++)
```

```
    { if (p[i] == '{' || p[i] == '[' || p[i] == '(')
```

```
        a. push p[i];
```

```
        cons++;
```

```
    }
```

```
if ( ! r.empty() ) {
```

```
    if ( p[i] == '(' ) {
```

```
        if ( r.peak() == '(' )
```

```
            r.pop();
```

```
        continue;
```

```
    else
```

```
        break;
```

```
    if ( p[i] == '[' ) {
```

```
        if ( r.peak() == '[' )
```

```
            r.pop();
```

```
        continue;
```

```
    }
```

```
    if ( p[i] == ')' ) {
```

```
        if ( r.peak() == '(' )
```

```
            r.pop();
```

```
        continue;
```

```
    }
```

else

break;

} (Node * node) {

if (node->left == NULL && node->right == NULL) {
if (node->data == 0) {
cout << "OK";

cout << "Height of left tree" << leftHeight;

else

cout << "Height of right tree" << rightHeight;

}

}

Ans to the Q.No: 3

```
void LRHeight (Node *data) {  
    int left_height = LRHeight (data->left);  
    int right_height = LRHeight (data->right);  
    cout << "Height of left tree" << left_height;  
    cout << "Height of Right tree" << right_height;  
}
```


Ans to the Q.No:4

Ans

→

In program Line 1 queue(Q1) and stack(S1) are created

In Line 2 a Loop untill end of data is taken.

In Line 3 the number from the data are taken.

Now showing it step by step

PUSH(S1) POP(S1) Enqueue(Q1)

As $"-1"$ fuls

As $"5" > 0$ Hence if condition satisfied

and enter into (stack)

1. 5	—	—	0
2. 7	—	—	0
3. 12	—	—	1
4. 4	—	—	—

As "-1" fail the condition " ≥ 0 " [POP]

5. —	4	—	0
------	---	---	---

Now it again enters into loop as s_1 is not empty loop condition is satisfied,

again [POP] and [enqueue], until

empty

6. —	12	—	1
7. —	—	—	2
8. —	7	—	—

9. — — — 72 !

10. — — — 5 — F, 8

11. — — — 521.8

as stack empty again first loop

[900] 12. "4" condition fails "1" A

13. 6 — — —

14. 0 — — — Now it again enters into loop

15. 8 — — — not empty for condition

16. 67 — — — [900] 17. 34 — — —

18. 23 — — —

19. 5 — — —

Again [-2] condition fails

20. 9-10 1-21 10-18 5-19 10-20 1-21 1-22

21. — 23 — — — —

22. — — — — — —

23. — 34 — — — —

24. — — — — — —

25. — 67 — — — —

26. — — — — — —

27. — 8 — — — —

28. — — — — — —

29. — 0 — — — —

30. — — — — — —

1	3	9	8	10	18	10	2	5	21	6
---	---	---	---	----	----	----	---	---	----	---

32. — — — — — —

33. — — — — — —

34. — — — — — —

—
8
—
—
—
—
—
—
—
—

10-11 10-12

As stack is empty, again 1st step

35. 44

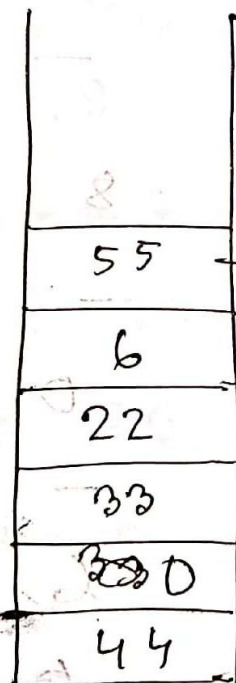
36. 0

37. 33

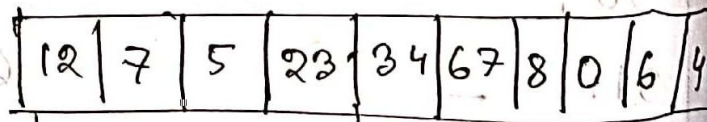
38. 22

39. 6

40. 55



Stack final



front

↓
Queue final