MID TERM

Date: Nov. 9 2022

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SCORE:

I

1. ((d > 10 && d < 100) || (d == 500))
2. F: (4 (square t)) / (t+2)) - 20
3. A = ((b1 + b2) / 2) * h
4. ((x*x) + ((b*x)/a) + ((b*b)/(4(a*a))) = -((c/a) + (b*b)/(4(a*a)))
5. V = (0.3 * 3.1416 * (r*r) * h)
6. A = (0.2 * b * h)

II

1. input, process, output
2. Conditionals
3. sequence, selection, loop
4. infinite loop
5. continue statement
6. control structure
7. selection statement
8. boolean expression
9. comparison operator
10. if (boolean expression)
    { body of if statement
    }
11. truth function
12. if (boolean expression)
    { body of if statement
    }
    else
    { body of else statement

true

13. break statement

II

① [redacted]

a. [redacted] true

b. false

c. false

d. false

e. false

f. true

②.

a. !(12>10) = false

b. 12<=15 || 18<15 = false

c. (12!=5) && (18!=30) = true

d. 12>=30 || (12+18>=30) = true

e. ((12<=18-2) && (18>=30) || (30-2!=20) = true

③.

A.

```
0
1.
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
j=50
```

B.

Ans: 2.8900000

C.

Answ: 2.4555556

D.

41.85216

Ans: [redacted]

E.

Ans: 10 30

F.

Ans: 2 2

G:

Ans: 1 3

H.

Ans: 5

I.

Ans: *
*
*
*

J.

Ans: 13579

K.

Ans: 11 18 25

L:

Ans:

1
2
3
4
5
6
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11
12
13
14
15
16
17
18
19 [redacted]
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96
97
98
99
100

M.

Ans: Sum = 209668320

N.

Ans: Sum = 32908

O.

Ans:

0 - 24

25 - 49

50 - 74

75 - 99

100 - 124

125 - 149

150 - 174

175 - 200

IV

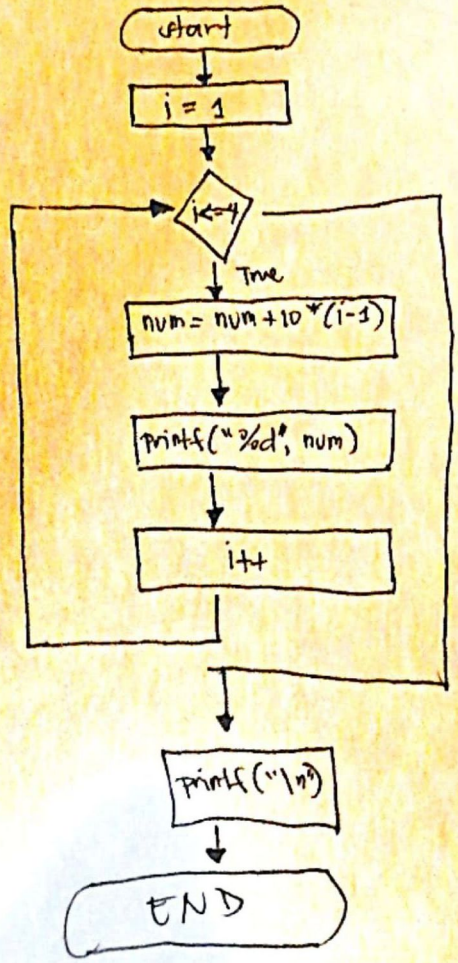
1.
```
num = 0
for (i = 1; i<=4; i++)
{
  num = num + 10 * (i-1);
  printf ("%d", num);
}
printf ("\n");
```

Output:

Ans: 0 10 30 60

Flowchart:

Ans:



HAND TRACING

i = 1	i<=4	num = num + 10 * (i-1)	Printf("%d", num)	i++
	1<=4	num = 0 + 10 * 0	0	2
	2<=4	num = 0 + 10 * 1	10	3
	3<=4	num = 0 + 10 * 2	20	4
	4<=4	num = 0 + 10 * 3	30	5
	5<=4			

Printf("\n")

2.

```
j = 2
for(i=0; i<=5; i++)
{
  printf("%d", j)
  j = 2*j+3;
}
printf("\n");
```

Output

Ans: 2 7 17 37 77 157

Flowchart

Ans:

Dry Tracing

j=2

i<=5	Prints("%d", j)	j=2*j+3	i++
0<=5	2	j=2*2+3	0
1<=5	7	j=2*7+3	1
2<=5	17	j=2*17+3	2
3<=5	37	j=2*37+3	3
4<=5	77	j=2*77+3	4
5<=5	157		5
6<=5			6

printf("\n")