10/01/24 TASK

① Solution:

Iteration 1

N! = 0

248! = 0 (true)

P = N % 10

P = 248 % 10 => 8

P = 8

M = M + N % P

= 30 + 248 % 0

= 30 + 0 => 30

M = 30

N = N / 10

= 248 / 10

N = 24

Iteration 2

N! = 0

24! = 0 (true)

P = N % 10

P = 24 % 10

P = 4

M = M + N % P

= 30 + 24 % 4

= 30 + 0

M = 30

N = N / 10

N = 24 / 10

N = 2

Iteration 3

N! = 0 => 2! = 0 (true)

P = N % 10

= 2 % 10

P = 2

M = M + N % P

= 30 + 2 % 2

= 30 + 0 = 30

M = 30

N = N / 10

= 2 / 10

N = 0

Iteration 4

N! = 0

0! = 0 (false)

↓

PRINT M

↓

Stop

Output:

M = 30

O/P:

30

② Solution:

Iteration 1

A = 62

B = 7

B! = 0

7! = 0 (true)

D = A % 10

= 62 % 10

D = 2

Q = A / 10

= 62 / 10

Q = 6

D = D * 10

= 2 * 10

D = 20

A = D + Q

= 20 + 6

A = 26

A = A + 1

= 26 + 1

A = 27

B = B - 1

= 7 - 1

B = 6

Iteration 2

B! = 0

6! = 0 (true)

D = A % 10

= 27 % 10

D = 7

Q = A / 10

= 27 / 10

Q = 2

D = D * 10

= 7 * 10

D = 70

A = D + Q

= 70 + 2

A = 72

A = A + 1

= 72 + 1

A = 73

B = B - 1

= 6 - 1

B = 5

Iteration 3

B! = 0

5! = 0 (true)

D = A % 10

= 73 % 10

D = 3

Q = A / 10

= 73 / 10

Q = 7

D = D * 10

= 3 * 10

D = 30

A = D + Q

= 30 + 7

A = 37

A = A + 1

= 37 + 1

A = 38

B = B - 1

= 5 - 1

B = 4

Iteration 4

B! = 0

4! = 0 (true)

D = A % 10

= 38 % 10

D = 8

Q = A / 10

= 38 / 10

Q = 3

D = D * 10

= 8 * 10

D = 80

A = D + Q

= 80 + 3

A = 83

A = A + 1

= 83 + 1

A = 84

B = B - 1

= 4 - 1

B = 3

Iteration 5

B! = 0

3! = 0 (true)

D = A % 10

= 84 % 10

D = 4

Q = A / 10

= 84 / 10

Q = 8

D = D * 10

= 4 * 10

D = 40

A = D + Q

= 40 + 8

A = 48

A = A + 1

= 48 + 1

A = 49

B = B - 1

= 3 - 1

B = 2

Iteration 6

B! = 0

2! = 0

D = A % 10

= 49 % 10

D = 9

Q = A / 10

= 49 / 10

Q = 4

D = D * 10

= 9 * 10

D = 90

A = D + Q

= 90 + 4

A = 94

A = A + 1

= 94 + 1

A = 95

B = B - 1

= 2 - 1

B = 1

Iteration 7

B != 0

1 != 0 (true)

D = A % 10

= 95 % 10

D = 5

Q = A / 10

= 95 / 10

Q = 9

D = D * 10

= 5 * 10

D = 50

A = D + Q

= 50 + 9

A = 59

A = A + 1

A = 59 + 1

A = 60

B = B - 1

1 - 1

B = 0

Iteration 8

B != 0

0 != 0 (false)

↓

Print A [A=60]

↓

Stop

O/P:

60

③ Solution:

int p, q, r

Set p = 5

q = 8

r = 4

P = 0101

q = 1000

r = 0100

$(9)_{10} = 1001_2$

P ^ q = (0101) ^ (1001)

$P \wedge q = 1100_2 = (12)_{10}$

10 + p = 10 + 5 = 15

(p ^ q) < (10 + p)

12 < 15 (true)

P = q + q

= 8 + 8

P = 16

Print p + q + r

= 16 + 8 + 4

= 28

O/P:

28

④ Solution:

Int funn (int a, int b)

a = b

b = 7

if (b > a && a > 3)

7 > 6 && 6 > 3 = true

↳

a = (b + 1) + a

= (7 + 1) + 6

a = 14

b = 1 + 3 + a

= 1 + 3 + 14

b = 18

return a - funn (b, b)

↳

a = 18

b = 18

(b > a && a > 3)

18 > 18 && 18 > 3 = False

end if

return b - 1

18 - 1 = 17

return 17

return a - 17

14 - 17

return -3

dp:

-3

(5) Solution:

Int a, b, c

Set a = 3

b = 4

c = 10

a = 10 + b

= 10 + 4

a = 14

If ((a+b+c) < (b+c+a))

14 + 4 + 10 < 4 + 10 + 14

28 < 28

(false)

else

if ((b+c) < (c-b))

(4+10) < (10-4)

14 < 6

(false)

end if

a = 10 + b

a = 10 + 4

a = 14

Print a+b+c

14 + 4 + 10

= 28

∴ O/P:

28