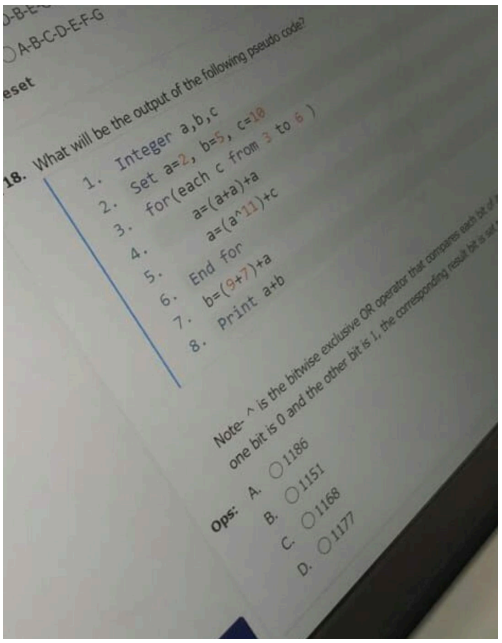
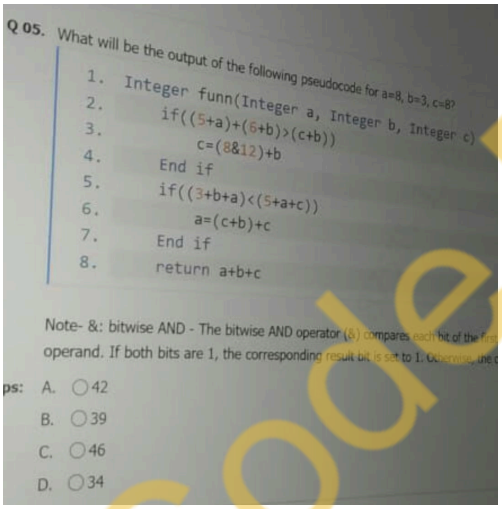
Q1.



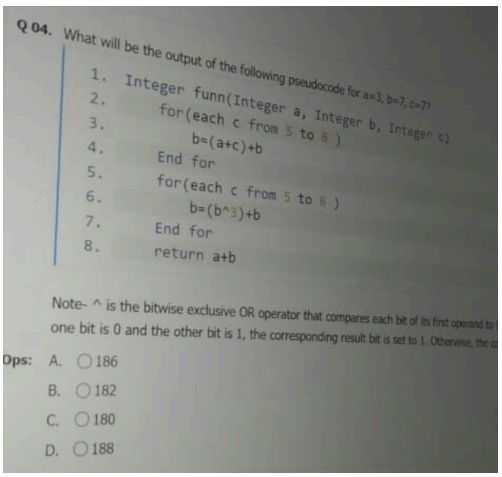
Answer : 1168

Q2.



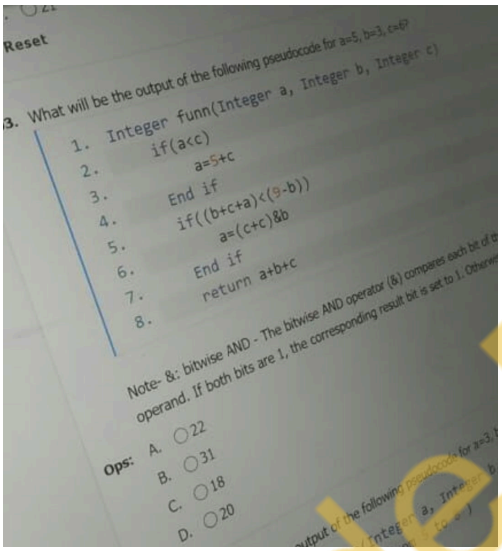
Answer :39

Q3.



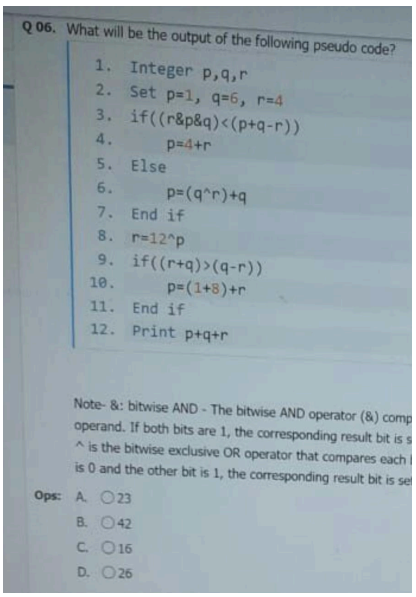
Answer :182

Q4.



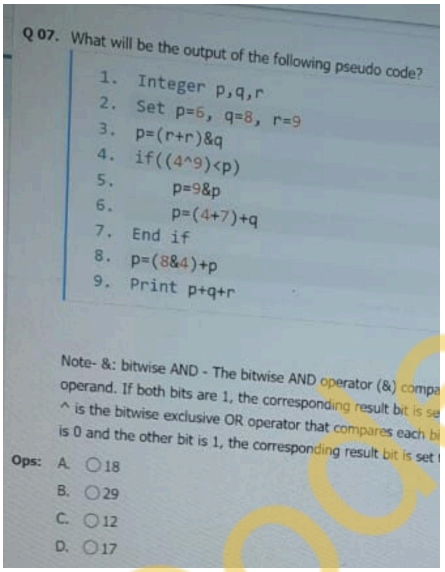
Answer :20

Q5.



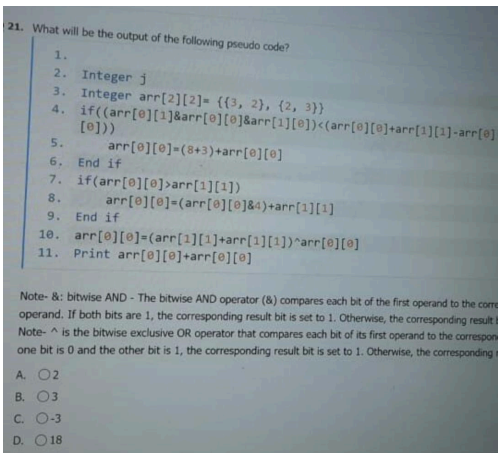
Answer : 23

Q6.



Answer : 17

Q7.


21. What will be the output of the following pseudo code?

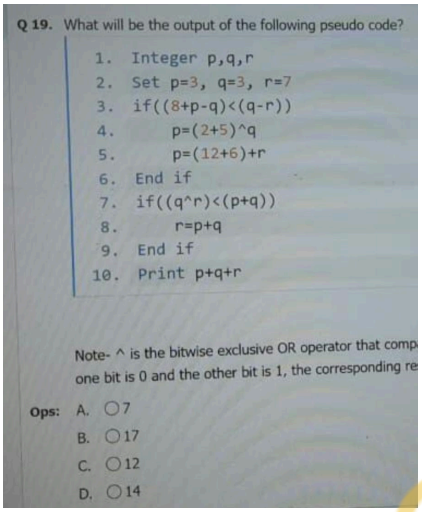
```
1.
2.  Integer j
3.  Integer arr[2][2]= {{3, 2}, {2, 3}}
4.  if((arr[0][1]&arr[0][0]&arr[1][0])<(arr[0][0]+arr[1][1]-arr[0]
    [0]))
5.      arr[0][0]=(8+3)+arr[0][0]
6.  End if
7.  if(arr[0][0]>arr[1][1])
8.      arr[0][0]=(arr[0][0]&4)+arr[1][1]
9.  End if
10. arr[0][0]=(arr[1][1]+arr[1][1])^arr[0][0]
11. Print arr[0][0]+arr[0][0]
```

Note- &: bitwise AND - The bitwise AND operator (&) compares each bit of the first operand to the corre
operand. If both bits are 1, the corresponding result bit is set to 1. Otherwise, the corresponding result
Note- ^ is the bitwise exclusive OR operator that compares each bit of its first operand to the correspon
one bit is 0 and the other bit is 1, the corresponding result bit is set to 1. Otherwise, the corresponding

A. ○2
B. ○3
C. ○-3
D. ○18

Answer : 2

Q8.


Q 19. What will be the output of the following pseudo code?

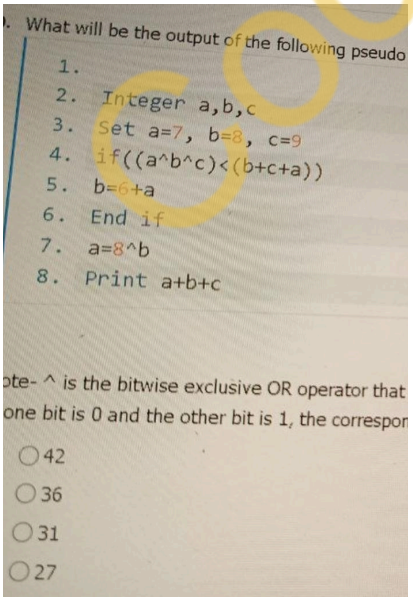
```
1.  Integer p,q,r
2.  Set p=3, q=3, r=7
3.  if((8+p-q)<(q-r))
4.      p=(2+5)^q
5.      p=(12+6)+r
6.  End if
7.  if((q^r)<(p+q))
8.      r=p+q
9.  End if
10. Print p+q+r
```

Note- ^ is the bitwise exclusive OR operator that comp
one bit is 0 and the other bit is 1, the corresponding re

Ops: A. ○7
B. ○17
C. ○12
D. ○14

Answer :12

Q9.


. What will be the output of the following pseudo

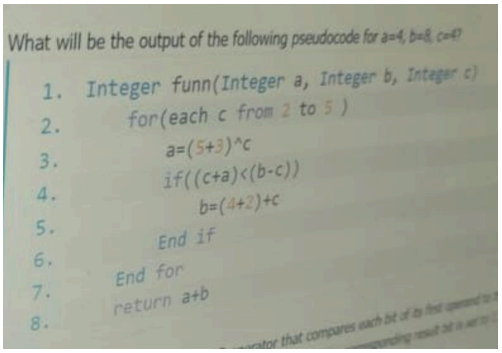
```
1.
2.  Integer a,b,c
3.  Set a=7, b=8, c=9
4.  if((a^b^c)<(b+c+a))
5.  b=6+a
6.  End if
7.  a=8^b
8.  Print a+b+c
```

ote- ^ is the bitwise exclusive OR operator that
one bit is 0 and the other bit is 1, the correspor

○42
○36
○31
○27

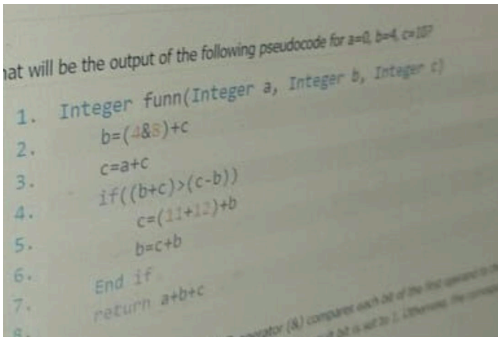
Answer : 27

Q10.



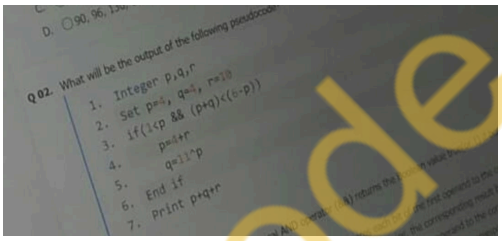
Answer :21

Q11.



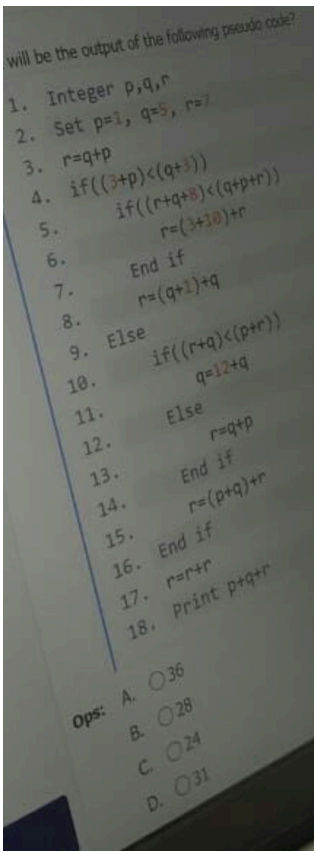
Answer : 76

Q12.



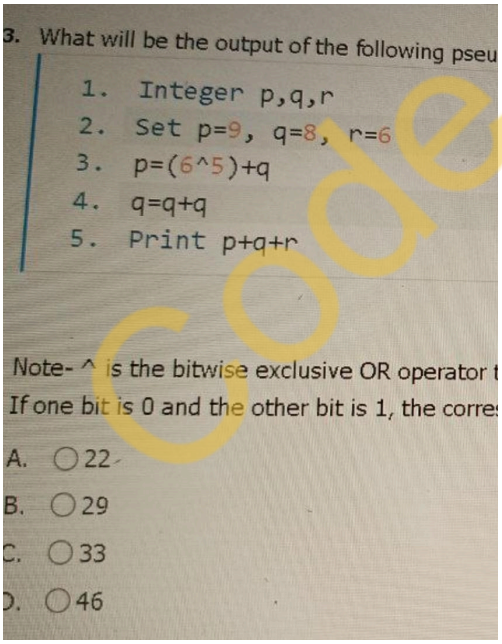
Answer :18

Q13.



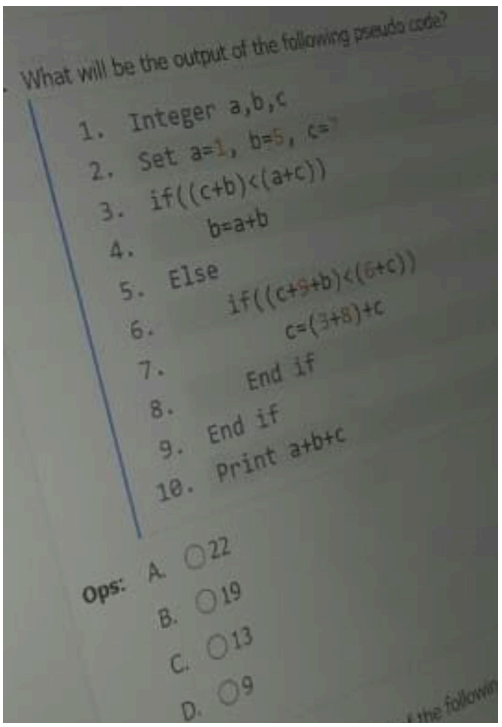
Answer :28

Q14.



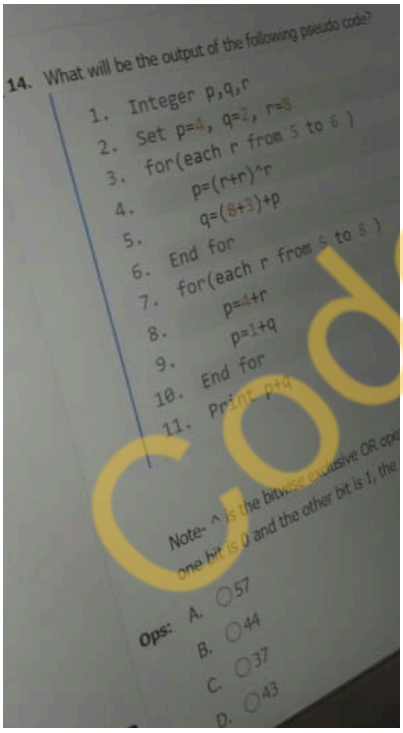
Answer : 33

Q15.



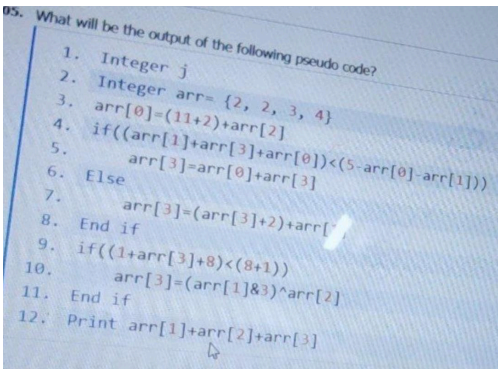
Answer : 13

Q16.



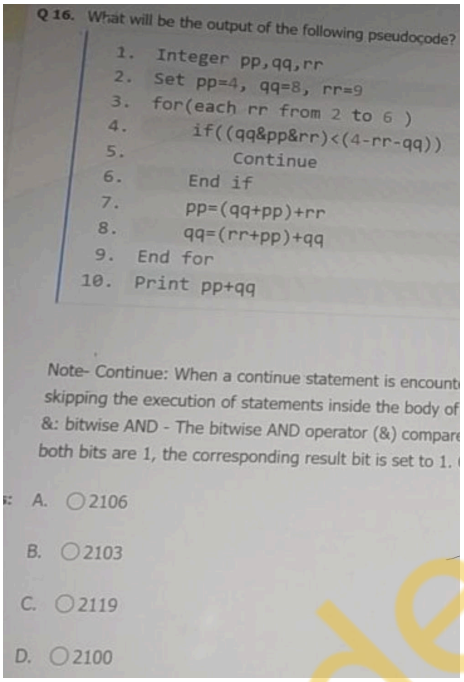
Answer :43

Q17.



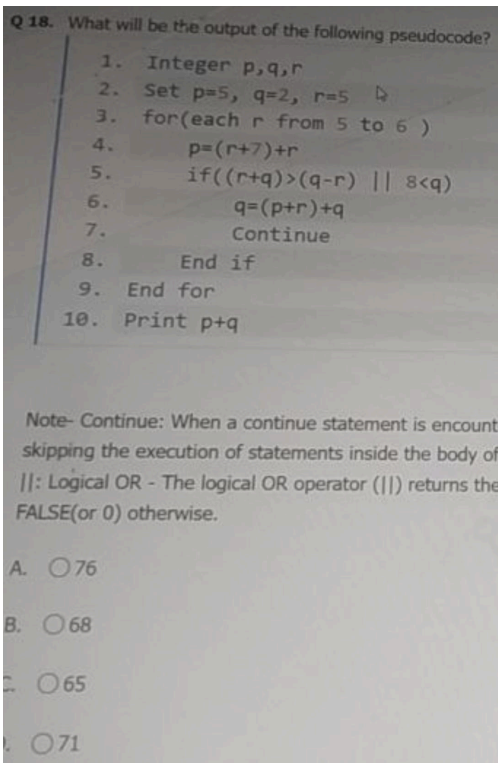
Answer : 15

Q18.



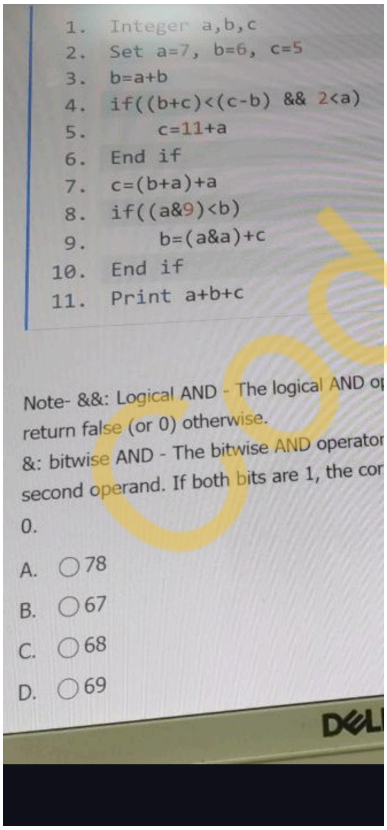
Answer : 2103

Q19.



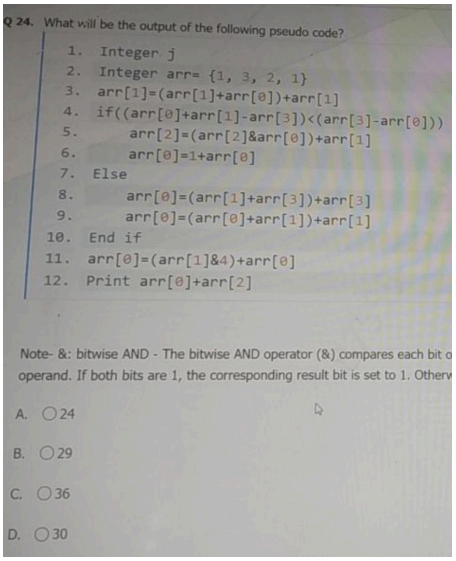
Answer : 68

Q20.



Answer : 68

Q21.


Q 24. What will be the output of the following pseudo code?

```
1.  Integer j
2.  Integer arr= {1, 3, 2, 1}
3.  arr[1]=(arr[1]+arr[0])+arr[1]
4.  if((arr[0]+arr[1]-arr[3])<(arr[3]-arr[0]))
5.      arr[2]=(arr[2]&arr[0])+arr[1]
6.      arr[0]=1+arr[0]
7.  Else
8.      arr[0]=(arr[1]+arr[3])+arr[3]
9.      arr[0]=(arr[0]+arr[1])+arr[1]
10. End if
11. arr[0]=(arr[1]&4)+arr[0]
12. Print arr[0]+arr[2]
```

Note- &: bitwise AND - The bitwise AND operator (&) compares each bit o
operand. If both bits are 1, the corresponding result bit is set to 1. Otherw

A. ○ 24

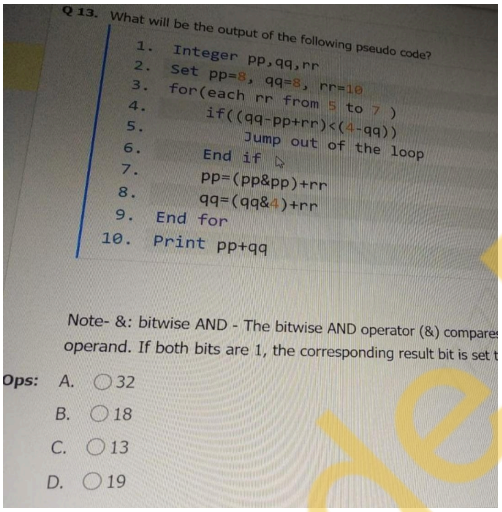
B. ○ 29

C. ○ 36

D. ○ 30

Answer : 29

Q22.


Q 13. What will be the output of the following pseudo code?

```
1.  Integer pp,qq,rr
2.  Set pp=8, qq=8, rr=10
3.  for(each rr from 5 to 7 )
4.      if((qq-pp+rr)<(4-qq))
5.          Jump out of the loop
6.      End if
7.      pp=(pp&pp)+rr
8.      qq=(qq&4)+rr
9.  End for
10. Print pp+qq
```

Note- &: bitwise AND - The bitwise AND operator (&) compares
operand. If both bits are 1, the corresponding result bit is set t

Ops: A. ○ 32

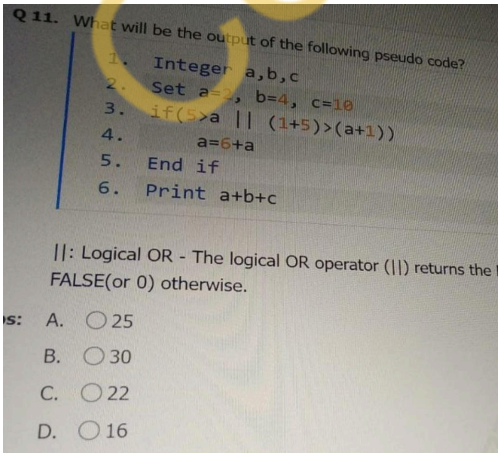
B. ○ 18

C. ○ 13

D. ○ 19

Answer : 18

Q23.


Q 11. What will be the output of the following pseudo code?

```
1.  Integer a,b,c
2.  Set a=2, b=4, c=10
3.  if(5>a || (1+5)>(a+1))
4.      a=6+a
5.  End if
6.  Print a+b+c
```

||: Logical OR - The logical OR operator (||) returns the
FALSE(or 0) otherwise.

s: A. ○ 25

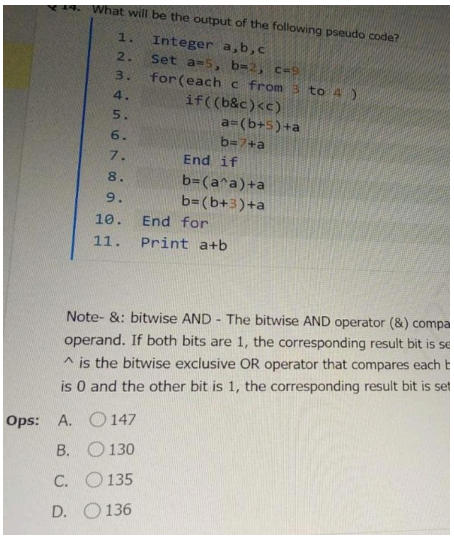
B. ○ 30

C. ○ 22

D. ○ 16

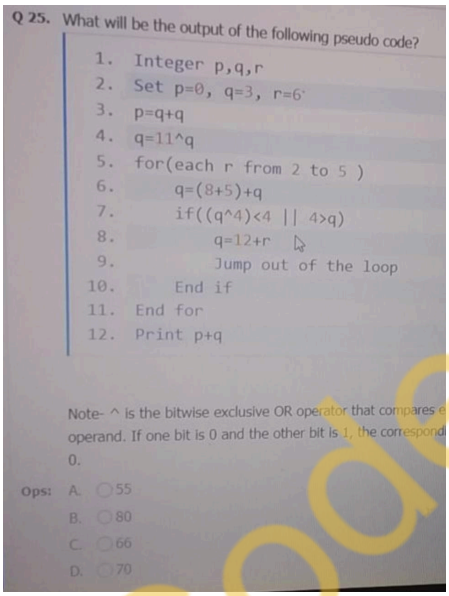
Answer : 22

Q24.



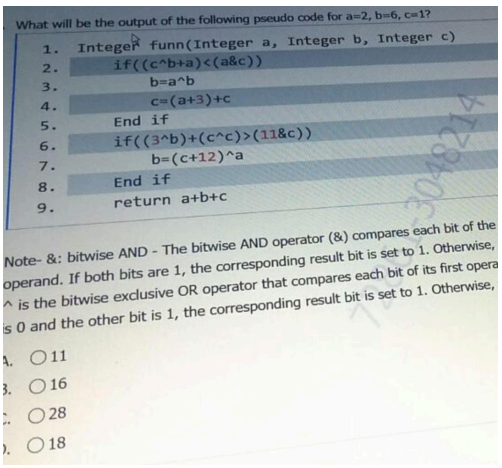
Answer : 135

Q25.



Answer : 66

Q26.


What will be the output of the following pseudo code for a=2, b=6, c=1?

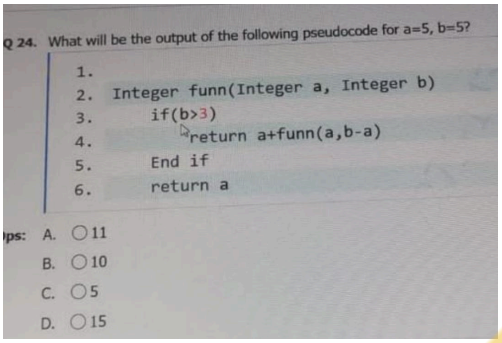
```
1.  Integer funn(Integer a, Integer b, Integer c)
2.      if((c^b+a)<(a&c))
3.          b=a^b
4.          c=(a+3)+c
5.      End if
6.      if((3^b)+(c^c)>(11&c))
7.          b=(c+12)^a
8.      End if
9.      return a+b+c
```

Note- &: bitwise AND - The bitwise AND operator (&) compares each bit of the operand. If both bits are 1, the corresponding result bit is set to 1. Otherwise, ^ is the bitwise exclusive OR operator that compares each bit of its first opera is 0 and the other bit is 1, the corresponding result bit is set to 1. Otherwise,

A. ○ 11
B. ○ 16
C. ○ 28
D. ○ 18

Answer : 18

Q27.

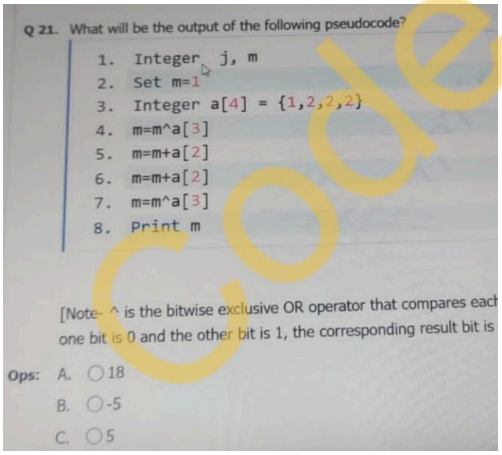

Q 24. What will be the output of the following pseudocode for a=5, b=5?

```
1.
2.  Integer funn(Integer a, Integer b)
3.      if(b>3)
4.          return a+funn(a,b-a)
5.      End if
6.      return a
```

Ops: A. ○ 11
B. ○ 10
C. ○ 5
D. ○ 15

Answer :10

Q28.


Q 21. What will be the output of the following pseudocode?

```
1.  Integer j, m
2.  Set m=1
3.  Integer a[4] = {1,2,2,2}
4.  m=m^a[3]
5.  m=m+a[2]
6.  m=m+a[2]
7.  m=m^a[3]
8.  Print m
```

[Note- ^ is the bitwise exclusive OR operator that compares each one bit is 0 and the other bit is 1, the corresponding result bit is

Ops: A. ○ 18
B. ○ -5
C. ○ 5

Answer :5

Q29.

Q 22. What will be the output of the following pseudo code?

```
1.  Integer p,q,r
2.  Set p=1, q=8, r=10
3.  for(each r from 3 to 6 )
4.      if((q^p)<r)
5.          Jump out of the loop
6.      End if
7.      q=(p+6)+q
8.      p=(p&p)+r
9.  End for
10. Print p+q
```

Note- &: bitwise AND - The bitwise AND operator (&) co
operand. If both bits are 1, the corresponding result bit
^ is the bitwise exclusive OR operator that compares ea
is 0 and the other bit is 1, the corresponding result bit is

Ops: A. 92
B. 77
C. 73
D. 85

Answer : 77

Q30.

18. What will be the output of the following pseudo code?

```
1.  Integer p,q,r
2.  Set p=0, q=3, r=9
3.  for(each r from 5 to 8 )
4.      q=q+q
5.      if(9<q && (r+p)>(p-r))
6.          p=r+q
7.          p=(q+q)+r
8.          Jump out of the loop
9.      End if
10. End for
11. Print p+q
```

Answer : 42

Q31.

ill be the output of the following pseudo code for a=1, b=3, c=5?

```
Integer funn(Integer a, Integer b, Integer c)
    if((c&b)>(2-a))
        a=b+c^3
        if((c^b)<(b+a))
            if((b&9)>(c&b))
                c=(3+b)+a
            End if
        End if
        c=a&b+3
    End if
  c=7&b;
   return a+b+c
```

Answer : 7

Q32.

What will be the output of the following pseudo code?

```
1.  Integer p,q,r
2.  Set p=9, q=9, r=11
3.  for(each r from 5 to 7 )
4.      q=q+p
5.      q=(r^5)+r
6.  End for
7.  for(each r from 2 to 4 )
8.      p=q+r
9.  End for
10. Print p+q
```

Answer : 22

Q33.

16. What will be the output of the followin

```
1.  Integer p,q,r
2.  Set p=8, q=4, r=8
3.  if((q+8)>(r-q))
4.      p=r+p
5.  End if
6.  p=9^q
7.  Print p+q+r
```

Note- ^ is the bitwise exclusive OR op
one bit is 0 and the other bit is 1, the

A. ○ 35
B. ○ 25
C. ○ 18
D. ○ 28

Answer : 25

Q34.

What will be the output of the following pseudocode for a=6, b=3, c=4?

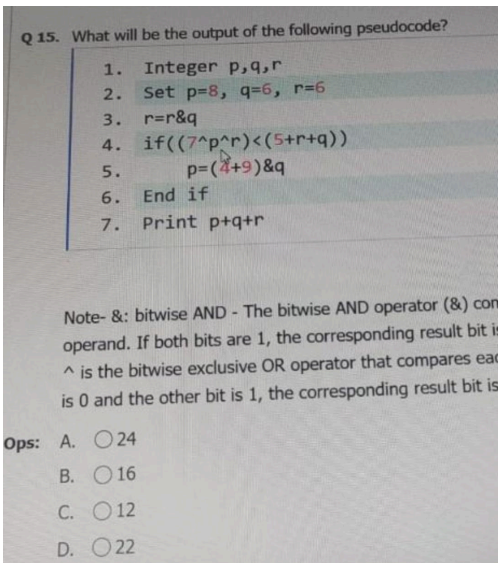
```
1.
2.  Integer funn(Integer a, Integer b, Integer c)
3.      for(each c from 5 to 6 )
4.          b=(b+a)^a
5.      End for
6.      return a+b
```

Note- ^ is the bitwise exclusive OR operator that compares each bit of its first o
one bit is 0 and the other bit is 1, the corresponding result bit is set to 1. Other

A. ○ 37
B. ○ 23
C. ○ 25
D. ○ 29

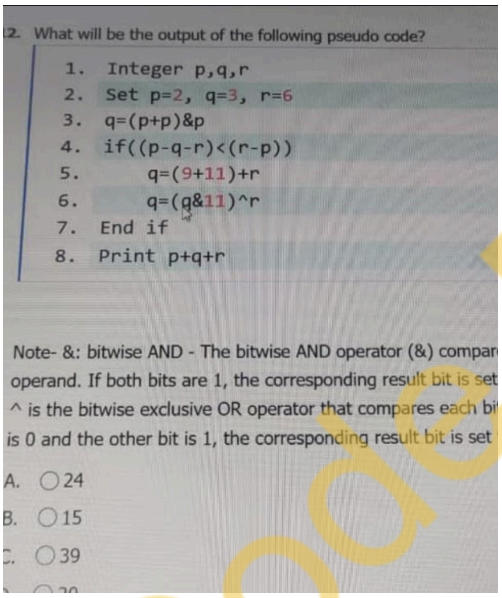
Answer :25

Q35.



Answer : 16

Q36.



Answer :20

Q37.

Q 11. What will be the output of the following pseudo co

```
1.  Integer a,b,c
2.  Set a=7, b=4, c=7
3.  a=(b+5)+a
4.  c=(a&7)^c
5.  if((a^7)<7 && (9^4)<c)
6.      c=(3+12)+c
7.      a=8+b
8.  Else
9.      b=1+a
10.     c=(a+b)+c
11. End if
12. Print a+b+c
```

Answer : 73

Q38.

Q 13. What will be the output of the following pseudo co

```
1.  Integer a,b,c
2.  Set a=2, b=9, c=8
3.  if((c^a)<(b+c) || 3<a)
4.      c=a+c
5.  End if
6.  Print a+b+c
```

Note- ^ is the bitwise exclusive OR operator that
one bit is 0 and the other bit is 1, the correspond
||: Logical OR - The logical OR operator (||) retu
FALSE(or 0) otherwise

A. ○ 22
B. ○ 21
C. ○ 29
D. ○ 16

Answer : 21

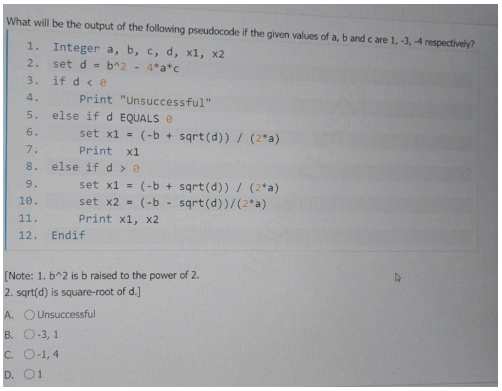
Q39.

Q 25. What will be the output of the following pseudo code

```
1.  Integer p,q,r
2.  Set p=2, q=3, r=6
3.  for(each r from 2 to 3 )
4.      p=(10+2)+q
5.      if((q^r)<r)
6.          Continue
7.      Else
8.          p=(q+9)+p
9.      End if
10. End for
11. Print p+q
```

Answer : 18

Q40.



What will be the output of the following pseudocode if the given values of a, b and c are 1, -3, -4 respectively?

```
1.  Integer a, b, c, d, x1, x2
2.  set d = b^2 - 4*a*c
3.  if d < 0
4.      Print "Unsuccessful"
5.  else if d EQUALS 0
6.      set x1 = (-b + sqrt(d)) / (2*a)
7.      Print  x1
8.  else if d > 0
9.      set x1 = (-b + sqrt(d)) / (2*a)
10.     set x2 = (-b - sqrt(d))/(2*a)
11.     Print x1, x2
12. Endif
```

[Note: 1. b^2 is b raised to the power of 2.
2. sqrt(d) is square-root of d.]

A. ○ Unsuccessful
B. ○ -3, 1
C. ○ -1, 4
D. ○ 1

Answer : -1,4

Q41.

Q2: What is the output of the following code?

```
int main()
{
   char *ptr = "Innoskrit";
   printf("%c", *&*&*ptr);
   return 0;
}
```

- a) I
- b) Innoskrit
- c) Segmentation Fault
- d) Compile Error

Q42.

Q1: What is the output of the following code?

```
#include<stdio.h>

int main()
{
   int arr[] = {10, 20, 30, 40, 50, 60};
   int *ptr1 = arr;
   int *ptr2 = arr + 5;
   printf("%d ", (ptr2 - ptr1));
   printf("%d", (char*)ptr2 - (char*) ptr1);
   return 0;
}
```

- a) 5 20
- b) 50 0
- c) 5 5
- d) Compile Error

Q43.

Q3: What is the output of the following code?

```
int main()
{
    char *ptr = "Innoskrit";
    printf("%s\n", *&*&ptr);
    return 0;
}
```

a) I

b) Innoskrit

c) Segmentation Fault

d) Compile Error

Q44.

Q4: What is the output of the following code?

```
#include<stdio.h>

void f(int *p, int *q)
{
  p = q;
  *p = 2;
}

int i = 0, j = 1;
int main()
{
  f(&i, &j);
  printf("%d %d \n", i, j);
  getchar();
  return 0;
}
```

a) 0 2

b) 2 2

c) 1 2

d) 0 1

Q45.

Q5: What is the output of the following code?

```
int f(int x, int *py, int **ppz) {
  int y, z;
  **ppz += 1;
   z  = **ppz;
  *py += 2;
   y = *py;
   x += 3;
   return x + y + z;
}

void main() {
   int c, *b, **a;
   c = 4;
   b = &c;
   a = &b;
   printf("%d ", f(c, b, a));
   return 0;
}
```

a) 18

b) 19

c) 21

d) 22

Q46.

Q6: What is the output of the following code?

```
#include<stdio.h>
int main()
{
    int a = 12;
    void *ptr = (int *)&a;
    printf("%d", *ptr);
    getchar();
    return 0;
}
```

a) 12

b) Compiler Error

c) Runtime Error

d) 0

Q47.

Q7: What is the output of the following code?

```
#include <stdio.h>
int main()
{
    int arr[] = {1, 2, 3, 4, 5};
    int *p = arr;
    ++*p;
    p += 2;
    printf("%d", *p);
    return 0;
}
```

a) 2

b) 3

c) 4

d) Compiler Error

Q48.

Q8: What is the output of the following code?

```
#include <stdio.h>

void f(int* p, int m)
{
    m = m + 5;
    *p = *p + m;
    return;
}
void main()
{
    int i=5, j=10;
    f(&i, j);
    printf("%d", i+j);
}
```

a) 10

b) 20

c) 30

d) 40

Q49.

Q9: What is the output of the following code?
Consider the size of int as two bytes and size of char as one byte. Assume that the machine is little-endian.

```
#include <stdio.h>

int main()
{
   int a = 300;
   char *b = (char *)&a;
   *++b = 2;
   printf("%d ",a);
   return 0;
}
```

- a) 300
- **b) 556**
- c) Compile Error
- d) Runtime Error

Q50.

Q10: Consider the following function implemented in C. The output of printxy(1, 1) is ?

```
void printxy(int x, int y)
{
   int *ptr;
   x = 0;
   ptr = &x;
   y = *ptr;
   *ptr = 1;
   printf("%d,%d", x, y);
}
```

- **a) 1, 0**
- b) 0, 0
- c) 2, 0
- d) 0, 1

Q51.

Q1: What is the output of the following code?

```
#include <stdio.h>
int main()
{
   int a[5] = {1,2,3,4,5};
   int *ptr = (int*)(&a+1);
   printf("%d %d", *(a+1), *(ptr-1));
   return 0;
}
```

- **a) 2 5**
- b) Garbage Value
- c) Compiler Error
- d) Segmentation Fault

Q52.

Q2: What is the output of the following code?

```
#include <stdio.h>

char *c[] = {"Innoskrit", "is", "best", "place."};
char **cp[] = {c+3, c+2, c+1, c};
char ***cpp = cp;

int main()
{
   printf("%s ", **++cpp);
   return 0;
}
```

a) Innoskrit

b) is

c) best

d) place.

Q53.

Q3: What is the output of the following code?

```
#include <stdio.h>

char *c[] = {"Innoskrit", "is", "best", "place."};
char **cp[] = {c+3, c+2, c+1, c};
char ***cpp = cp;

int main()
{
   ++cpp;
   printf("%s ", *--*++cpp+3);
   return 0;
}
```

a) oskrit

b) s

c) est

d) lace.

Q54.

Q4: What is the output of the following code?

```
#include <stdio.h>
int main()
{
   int a[][3] = {1, 2, 3, 4, 5, 6};
   int (*ptr)[3] = a;
   printf("%d %d ", (*ptr)[1], (*ptr)[2]);
   ++ptr;
   printf("%d %dn", (*ptr)[1], (*ptr)[2]);
   return 0;
}
```

a) 2 3 5 6

b) 4 5 0 0

c) 2 3 4 5

d) None of the above

Q55.

Q6: What is the output of the following code?

```
#include <stdio.h>
int main()
{
  int x = 2, y, z;
  x *= 3 + 2;
  printf("%d ", x);
  x += y = z = 4;
  printf("%d %d %d ", x, y, z);
  x = y == z;
  printf("%d", x);
}
```

a) 10 14 4 4 2

b) 10 14 4 4 1

c) 10 13 4 4 1

d) 10 13 4 4 2

Q56.

Q5: What is the output of the following code?

```
#include <stdio.h>
int main(){
  int i = 0, j = 2, k = 3, m;
  m = i++ && ++j || k++;
  printf("%d %d %d %d",i , j, k, m);
  return 0;
}
```

a) 1 2 4 2

b) 1 2 4 1

c) 2 2 4 1

d) None of the above

Q57.

Q7: What is the output of the following code?

```
#include <stdio.h>
#include <stdlib.h>

int main(void)
{
    int i;
    int *ptr = (int *) malloc(5 * sizeof(int));

    for (i = 0; i < 5; i++)
        *(ptr + i) = i;

    printf("%d ", *ptr++);
    printf("%d ", (*ptr)++);
    printf("%d ", *ptr);
    printf("%d ", *++ptr);
    printf("%d ", ++*ptr);
}
```

a) Compiler Error

b) 0 1 2 2 3

c) 0 1 2 3 4

d) 1 2 3 4 5

Q58.

Q8: What is the output of the following C code? Assume that the address of x is 2000 (in decimal) and an integer requires four bytes of memory.

```
#include <stdio.h>
int main()
{
  unsigned int x[4][3] = {{1, 2, 3}, {4, 5, 6},
                          {7, 8, 9}, {10, 11, 12}};
  printf("%u, %u, %u", x+3, *(x+3), *(x+2)+3);
}
```

- a) 2036, 2036, 2036
- b) 2012, 4, 2204
- c) 2036, 10, 10
- d) 2012, 4, 6

Q59.

Q9: What is the output of the following code?

```
# include <stdio.h>
int main( )
{
  static int a[] = {10, 20, 30, 40, 50};
  static int *p[] = {a, a+3, a+4, a+1, a+2};
  int **ptr = p;
  ptr++;
  printf("%d%d", ptr - p, **ptr};
}
```

- a) 140
- b) 120
- c) 100
- d) 40

Q60.

Q5: Consider the following C declaration:

```
struct
{
   short s[5];
   union
   {
      float y;
      long z;
   } u;
} t;
```

Assuming that objects of type short, float, and long occupy 2 bytes, 4 bytes, and 8 bytes respectively. The memory requirement for variable t, ignoring alignment considerations, is:

- a) 22 bytes
- b) 14 bytes
- c) 18 bytes
- d) 10 bytes

Q61.

Q7: Let A be a square matrix of size n x n. Consider the following pseudocode. What is the expected output?

```
C = 100
for i = 1 to n do
   for j = 1 to n do
   {
      Temp = A[i][j] + C
      A[i][j] = A[j][i]
      A[j][i] = Temp - C
   }
for i = 1 to n do
   for j = 1 to n do
      Output(A[i][j]);
```

- a) The matrix A itself
- b) Transpose of matrix A
- c) Adding 100 to the upper diagonal elements and subtracting 100 from diagonal elements of A.
- d) None of the above

Q62.

Q1: Evaluate the given postfix expression:

1 2 + 3 * 4 2 - 3 1 + * -

- a) 3
- b) 1
- c) 0
- d) 2

Q63.

Q1: The value of j at the end of the execution of the following pseudocode?

```
Integer incr(Integer i)
   Static Integer count = 0
   count = count + i
   return count

Main()
   Integer i, j
   for (start i from 0 to 4)
   j = incr(i)
   end for
```

- a) 10
- b) 4
- c) 6
- d) 7

Q64.

Q2: What is printed by the print statements in the program P1 assuming call by reference parameter passing?

```
Program P1()
{
   x = 10
   y = 3
   func1(y, x, x)
   print x
   print y
}

func1(x, y, z)
{
   y = y + 4
   z = x + y + z
}
```

a) 10, 3

b) 31, 3

c) 27, 7

d) None of these

Q65.

Q3: The value returned by the following function for f(1)?

```
int f(int n) {
   static int i = 1;
   if(n >= 5) return n;
   n = n + i
   i++
   return f(n);
}
```

a) 5

b) 6

c) 7

d) 8

Q66.

Q4: What is the output of the following code?

```
#include <stdio.h>

void fun(int n) {
   if(n > 0) {
      fun(n - 1);
      printf("%d", n);
      fun(n - 1);
   }
}

int main() {
  fun(3);
  return 0;
}
```

a) 1223221

b) 1213121

c) 1123211

d) None of the above

Q67.

Q5: What is the output of the following code?

```
#include <stdio.h>

void fun(int n) {
    if(n > 0) {
        fun(--n);
        printf("%d", n);
        fun(--n);
    }
}

int main() {
  fun(3);
  return 0;
}
```

a) 0110

b) 0123210

c) 0120

d) None of the above

Q68.

Q6: What is the output of the following code?

```
#include <stdio.h>
int f(int n)
{
    if(n <= 1)
        return 1;
    if(n%2 == 0)
        return f(n/2);
    return f(n/2) + f(n/2+1);
}


int main()
{
    printf("%d", f(11));
    return 0;
}
```

a) Stack Overflow

b) 3

c) 4

d) 5

Q69.

Q7: What is the output of the following code?

```
#include<stdio.h>
int f(int *a, int n)
{
  if(n <= 0) return 0;
  else if(*a % 2 == 0) return *a + f(a+1, n-1);
  else return *a - f(a+1, n-1);
}

int main()
{
  int a[] = {12, 7, 13, 4, 11, 6};
  printf("%d", f(a, 6));
  getchar();
  return 0;
}
```

a) -9

b) 5

c) 15

d) 19

Q70.

Q1: What does the following function do?

```
int fun(int x, int y)
{
   if (y == 0)   return 0;
   return (x + fun(x, y-1));
}
```

a) x + y

b) x * x + y

c) x * y

d) x ^ y

Q71.

Q2: What is the out of the following code?

```
#include <stdio.h>
int foo(int* a, int* b)
{
   int sum = *a + *b;
   *b = *a;
   return *a = sum - *b;
}
int main()
{
   int i = 0, j = 1, k = 2, l;
   l = i++ || foo(&j, &k);
   printf("%d %d %d %d", i, j, k, l);
   return 0;
}
```

a) 1 2 1 1

b) 1 1 2 1

c) 1 2 2 1

d) 1 2 2 2

Q72.

Q3: What is the Time Complexity of the following code?

```
int i, j, k = 0;
for (i = n / 2; i <= n; i++) {
  for (j = 2; j <= n; j = j * 2) {
     k = k + n / 2;
  }
}
```

a) O(n^2)

b) O(nLogn)

c) O(Logn)

d) None of the above

Q73.

Q4: What could be the context of the Queue 'Q' after the execution of the following code?
Input: 5, 7, 12, 4, 0, 4, 8, 67, 34, 23, 5, 0, 44, 33, 22, 6, 0

```
For a given input {
   Q = Create Queue
   S = Create Stack
   Loop (Not End Of File) {
      Read Number
      if (Number != 0)
         Push(S, Number)
      else {
         Pop(S)
         Pop(S)
         Loop(S != 0) {
            x = Pop(S)
            Enqueue(Q, x)
         }
      }
   }
}
```

a) 7, 34, 67, 8, 5, 0, 6

b) 5, 17, 67, 23, 44, 66, 22, 34

c) 7, 5, 34, 67, 33, 44, 8, 4

d) 7, 5, 34, 67, 8, 4, 33, 44

Q74.

Q5: What is the output of the following code?

```
#include <stdio.h>

int main() {
   int i, j, k, n;
   j = 1;
   k = 1;
   for(i = 1; i <= 5; i++) {
      printf("%d ", k);
      j = j + 1;
      k = k + j;
   }
  return 0;
}
```

a) 1 3 6 10 15

b) 1 2 3 4 5

c) 1 1 2 3 5

d) 2 4 6 8 10

Q75.

Q6: What is the output of the following code?

```
#include <stdio.h>

int main() {
   int a = 10, b = 3, c = 2, d = 4, res;
   res = a+a*-b/c%d+c*d;
   printf("%d", res);
  return 0;
}
```

a) -42

b) 24

c) -34

d) 15

Q76.

Q8: What is the output of the following code?

```
#include <stdio.h>
struct node {
   char *z;
   int i;
   struct node *p;
};

int main() {
   struct node n[] = {{"Innoskrit", 1, n + 1},
                      {"is", 2, n + 2},
                      {"best", 3, n + 3},
                      {"place", 4, n}};
   struct node *ptr = n;
   for(int j = 0; j < 4; j++) {
      printf("%d ", --n[j].i);
      printf("%s\n", ++n[j].z);
   }
  return 0;
}
```

a) 0 Innoskrit
1 is
2 best
3 place

b) 0 nnoskrit
1 s
2 est
3 lace

c) 0 Innoskrit
1 s
2 est
3 lace

d) None of these

Q77.

Q8: What is the output of the following pseudocode?

```
Integer a, b, c
Set a = 7, b = 7, c = 4
for(each c from 4 to 7)
    b = 2 + a
    b = (b + 11) + c
    a = (4 + 8) + a
End for
a = 4 + a
Print a + b
```

a) 122

b) 127

c) 118

d) 131

Q78.

Q9: What is the output of the following pseudocode?

```
Integer p, q, r
Set p = 0, q = 10, r = 7
if((r + q - p) > (p + r))
    r = p & p
End if
Print p + q + r
```

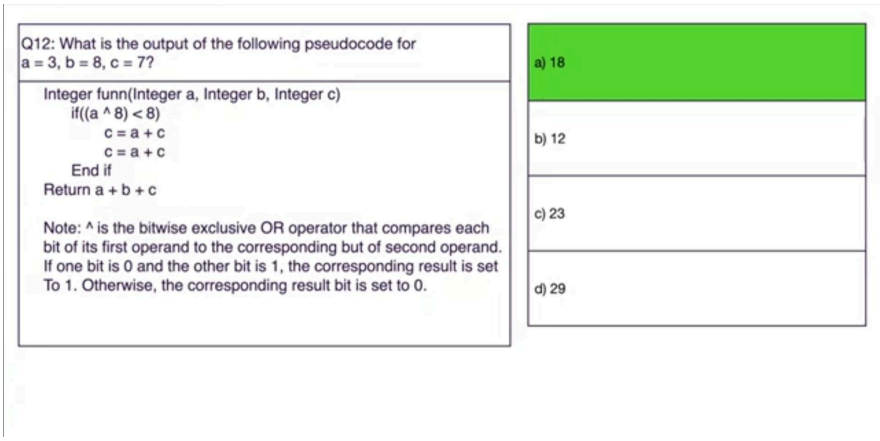
a) 10

b) 18

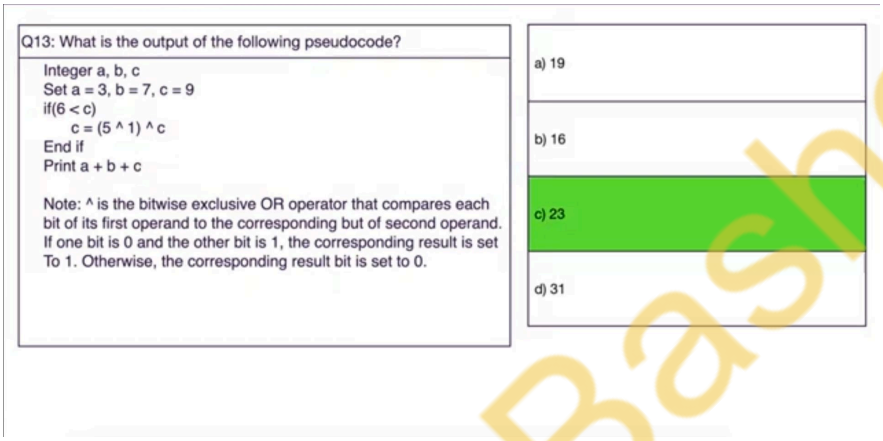
c) 0

d) 7

Q79.



Q80.



Q81.What will be the value of s if n=127?

Read n

i = 0, s = 0
Function Sample(int n)
while (n > 0)
r = n % 10
p = 8 ^ i
s=s+p*r
i++
n = n / 10
end while
return s

A. 27
B. 187
C. 87
D. 120

Answer: Option C

Explanation: The pseudocode calculates the sum based on powers of 8. The process results in s = 87 for n = 127

Q82. What will be the output if limit = 6 in the following pseudocode?

```
Read limit n1 = 0 , n2 = 1, n3 = 1 ,count = 1; while count <= limit
count = count + 1
print n3
n3=n1+n2
n1=n2
n2=n3
end while
```

A. 112358

B. 12358

C. 123581321

D. 12358132

Answer: Option A

Explanation: The pseudocode prints the Fibonacci sequence 1, 2, 3, 5, 8, spaces, resulting in 112358.

Q83. What will be the value of even counter if number = 2630 in the following pseudocode?

```
Read number

Function divisible(number)

even counter = 0, num_remainder = number;

while (num_remainder)

digit = num_remainder % 10;

if digit != 0 AND number % digit == 0

even_counter = even_counter + 1

end if

num_remainder = num_remainder / 10;

end while
```

return even_counter;

A. 3

B. 4

C. 2

D. 1

Answer: Option D

Explanation: The only digit that satisfies the conditions is 2. Hence, even_counter = 1.

Q84. Code to sort a given array in ascending order:

```
Read size
Read a[1] a[2] ... a[size]
i = 0
while ( i <size)
j = i + 1
while ( j <size)
if a[i] < a[j] then
t = a[i]
a[i] = a[j]
a[j] = t
end if
j = j + 1
end while
i = i + 1
end while
i = 0
while ( i <size)
print a[i]
i = i + 1
end while
```

Which line contains a wrong statement?
A. Line 4
B. Line 6
C. Line 7
D. No Error

Answer: Option C

Explanation: The given pseudocode sorts the array in descending due to the condition a[i] < a[j] in line 7.

Q85. What will be the output of the following pseudocode if a = 8 and b = 9

```
Function(input a, input b)

If(a < b)
return function (b, a)
elseif (b! = 0)
return (a + function(a, b - 1))
else
return 0
```

A. 56
B. 88
C. 72
D. 65

Answer: Option C

Explanation: Recursive calls happen with swapped values. After several calls, the function returns 72 when summing all recursive calls.

Q86. What will be the output of the following pseudocode if f = 6 and g =9?

```
Input f = 6, g = 9
sum = 0
If(g>f)
for(n= f; n < g; n = n + 1)
sum = sum + n
end for
else
print error message
print sum
```

A. 21

B. 15

C. 9

D. 6

Answer: Option A

Explanation: The loop runs for values n = 6, 7, 8 and the sum of these values is 6 + 7 + 8 =21.

Q87.What will be the output of the following pseudocode?

```
Initialize Integer x, y, z
Set y = 1, x = 2
z = x ^ y
Print z
```

A. 1

B. 2

C. 4

D. 3

Answer: Option D

Explanation: The operator represents the bitwise XOR operation.

For x = 2 (binary 10) and y = 1 (binary 01), XOR of 2 ^ 1 is 11 (binary), which equals 3.

Q88. Predict the output of the following pseudocode.

```
Integer value n
Set value = 1 , n = 45
while(value <= n)
value = value << 1
end loop
Print value
```

A. 16

B. 32

C 64

D. 36

Answer: Option C

Explanation: The << operator is the left shift operator, which doubles the value at each iteration. Starting from 1, we get 2, 4, 8, 16, 32, 64. The loop stops when value exceeds 45, so the output is 64.

Q89.What will be the output of the following pseudocode?

```
Initialize Integer x, y, z

Set y = 1 ,x = 2
z = x & y
```

Print z

A. 0

B. 2

C. 4

D. 3

Answer: Option A

Explanation: The & operator represents the bitwise AND operation.

For x = 2 (binary 10) and y = 1 (binary 01), 2 & 1 results in 00 (binary), which equals 0.

Q90.What will be the output of the following pseudocode?

```
Integer x, y
Set x = 4 y = 8
do {
Print x
x = x + y + 1
} while(x < 15)
```

A. 14 26

B. 15 17

C. 4 13

D. 4

Answer: Option C

Explanation: The loop runs only once.

Initially, x = 4 After printing 4, x = 4 + 8 + 1 = 13 The loop exits after printing 13 since x becomes greater than 15.

Q91. What will be the output of the following pseudocode?

```
Integer a, b, c
Set c = 12, b = 4
a=c/b
c = b >> a
Print c
```

A. 2

B. 0

C. 6

D. 4

Answer: Option B

Explanation: First, a = c/b = 12/4 =3. Then, c = b >> a = 4 >> 3. The right shift moves the bits of 4 (binary 100) three positions to the right, resulting in 000, which equals 0. Therefore, the output is 0.

Q92. Predict the output of the following pseudocode:

```
Integer a, b, c, d
Set b = 10 ,c = 11
a=b-c
for (each c from 2 to a)
b = b + c + 10
b = b / 2
end for
c=a+b+c
Print a b c
```

A.-1 7 9

B. 2 5 8

C. -1 10 20

D. 5 10 13

Answer: Option C

Explanation:

a = 10 - 11 = - 1

Since the loop condition (for each c from 2 to a) is invalid (a = - 1) the loop does not execute.

Final c = a + b + c = - 1 + 10 + 11 = 20

Q93. What will be the output of the following pseudocode for a = 4 b = 6

Integer funn (Integer a, Integer b)

```
If(a > 2)
If(b > 2)
Return a + b + funn(a + 1, b-5)
End If
End If
Return a - b
End function funn()
```

A. 12

B. 14

C. 17

D. 22

Answer: Option B

Explanation:

The condition triggers recursion with a = 5 and b = 1 The final value returned is 14.

Q94.What will be the output of the following pseudocode for a = 4 b = 6 ?

```
Integer funn (Integer a, Integer b)
If(a > 1)
Return a* funn(b - 6, a - 4)
Else
Return 1
End If
Return a + b
End function funn()
```

A. 0

B. 17

C. 4

D. 7

Answer: Option C

Explanation:

The recursive function reduces a and b until the base case is met (a = 1) The return value after all multiplications and recursive calls is 4.

Q95.What would be the output of the following pseudocode?

```
Integer a, b, c
Set a = 8
b = 51
c = 2

c = (a ^ c) ^ a
b = b mod 4
Print a + b + c
```

A.13

B. 17

C. 26

D. 16

Answer: A

Explanation:

a^ c = 8 ^ 2 = 10 and (10 ^ a) = 10 ^ 8 = 2 So, c = 2 .

b mod 4 = 51 mod 4 = 3

a = 8 b = 3 and c = 2

Therefore, a + b + c = 8 + 3 + 2 = 13

Q96.What will be the output of the following pseudocode?

```
Integer a, b, c
Set b = 40 a = 20 c = 20
a=a+c
c=c+a
a=a+c
c=c+a
Print a+b+c
```

A. 40

B. 100

C. 300

D. None of the above

Answer: C

Explanation:

a = 20 + 20 = 40

c = 20 + 40 = 60

a = 40 + 60 = 100

c = 60 + 100 = 160

a + b + c = 100 + 40 + 160 = 300

Therefore, the output is 300.

Q97.Integer a, b

Set a = 1, b = 1

a = (a^ 1) & (1) + (b^ 1) & (1)
Print a + b

A. 0

B. 1

C. 2

D. 3

Answer: B

Explanation:

a = (1^1) &1+ (1^1) & 1

1^1=0

0&1=0

b=1

Therefore, a 0+0=0 a+b=0+1=1.

Q98.28. Predict the output of the following pseudocode:

```
Integer a, b, c, d
Set b = 10 ,c = 11
a=b-c
for (each c from 2 to a)
b = b + c + 10
b = b / 2
end for
c=a+b+c
Print a b c
```

A.-1 7 9

B. 2 5 8

C. -1 10 20

D. 5 10 13

Answer: Option C

Explanation:
a = 10 - 11 = - 1

Since the loop condition (for each c from 2 to a) is invalid (a = - 1) the loop does not execute.

Final c = a + b + c = - 1 + 10 + 11 = 20

Q99.Predict the output of the following pseudocode if p = 15 and q = 4

```
Integer solve
(Integer p, Integer q)
Integer value
while(q)
value = p MOD q
p = q
q = value
End while
return p
End function solve()
```

A. 1

B. 2

C. 3

D. 5

Answer: Option A

Explanation:

The Euclidean algorithm computes the GCD. For p = 15 and q = 4 the GCD is 1.

Q100. What will be the output of the following pseudocode for a = 9, b = 7?

```
Integer funn (Integer a, Integer b)
Integer c
Set c = 2
b = b mod c
a = a mod c
return a + b
End function funn()
```

A. 2

B. 5

C. -5

D. 17

Answer: Option A

Explanation:

b mod 2 = 7 mod 2 = 1, and a mod 2 = 9 mod 2 = 1. So, the return value is a + b = 1+1=2.

Q101.What will be the output of the following pseudocode?

```
Integer a, b, c
Set a = 4 b = 8
c=a*b
a = c/(b-a)
b=b-a
Print a + b
```

A. 8

B. 6

C. 12

D. 4

Answer: A

Explanation:

c = 4 * 8 = 32

a = 32 / (8 - 4) = 32/4 = 8

b = 8 - 8 = 0

a + b = 8 + 0 = 8

Therefore, the output is 8

Q102.What will be the output of the following pseudocode?

```
Integer a, b, c
Set a = 7 , b = 3
c = a%b
a=c*2
b = a + 1
Print b - c
```

A. 6

B. 2

C. 4

D. 3

Answer: B

Explanation:

c = 7% 3 = 1

a = 1 * 2 = 2

b = 2 + 1 = 3

b - c = 3 - 1 = 2

Therefore, the output is 2.

Q103.What will be the output of the following pseudocode?

```
Integer x, y
```

```
Set x = 8 ,y = 4
x = x - y
y = x+ y
Print x * y
```

A. 32

B. 24

C. 16

D. 12

Answer: A

Explanation:

x = 8 - 4 = 4

y = 4 + 4 = 8

xy = 4 * 8 = 32

Therefore, the output is 32.

Q104.What will be the output of the following pseudocode?

```
Integer x, y
Set x = 7 y = 2
x=x+y
y=x-y
Print x * y
```

A. 54

B. 15

C. 63

D. 18

Answer: C

Explanation:

x = 7 + 2 = 9

y = 9 - 2 = 7

xy = 9 * 7 = 63

Therefore, the output is 63.

Q105. What will be the output of the following pseudocode?

```
Integer x, y, z
Set x = 3
Set y = 90
while(y is greater than 0);
y = y / 3
x = x + 6
c = x + y
while(c is greater than 30)
if(c mod 3 is equals to 0):
Write x
else:
Write y
c = c / 5
Write c
```

A. 9,33

B. 9,30

C. 9,36,9

D. 9 33 6

Answer: 9 33 6

Explanation:

The first loop reduces y by dividing it by 3 until y is no longer greater than 0.

x is incremented by 6 during each iteration.

The second loop prints values based on the condition c mod 3 = 0 and c is divided by 5 in each iteration.

The output sequence results in 9 33 6.

Q106.What will be the output of the following pseudocode?

```
integer p, q, r
Set p = 4, q = 6, r = 2
```

```
p = p + q + r - 7
q = p + r - 7
if (p > q)
Print Hello
else
Print Hi
```

A. Hello

B. Hi

C. Error

D. Hello Hi

Answer: Hello

Explanation: After the updates, p = 4 + 6 + 2 - 7 = 5 and q = 5 + 2 - 7 = 0 Since p > q, the output is "Hello".

Q107. What will be the output of the following pseudocode if num=4 and element of the array are 1,2,3,4,5

```
#include <stdio.h>
integer fun (int a[], int num)
integer x;
if (num is equal to 1)
return a[0];
x = fun (a, num1);
if (x == a[num - 1])
return x;
else
return a[num-1];
End the function fun ()
```

A. 1

B. 3

C. 4

D. 5

Answer: 4

Explanation: The function fun recursively compares elements and ultimately returns the element at index num - 1, which is 4 when num = 4

Q108.What will be the output of the following pseudocode?

```
#include <stdio.h>

int main() {
int p = 2 ,q = 3
for (int i = 0 ; i <= 6; i = i + 2 )
p = p + q + 1
p=p+q;
q = p-q;
printf("%d ",q); } }
```

A. 30

B. 5

C. 13

D. 18

Answer: 18

Q109. What will be the output of the following code?

```
#include <stdio.h>
int main()
{
int get_the_val;
get_the_val = (100, 256, 3.3);
printf("%d", get_the_val);
return 0;
}
```

A. 3

B. 3.3

C. 100

D. 256

Answer: 3

Explanation: In the statement get_the_val = (100, 256, 3.3);, the value assigned to get_the_val is the last value in the expression, which is 3.3. However, since get_the_val is an integer, the fractional part is discarded, resulting in 3.

Q110. What will be the output of the pseudocode?

```
#include <stdio.h>
int main()
{
static int val = 5.2;
printf("%d ",val--);
if(1.25)
main();
}
```

A. 1.5

B. 5.2

C. 4.2

D. Infinite loop

Answer: Infinite loop

Explanation: The static integer val is initialized to 5.2, which gets truncated to 5. The program recursively calls main() as long as if(1.25) evaluates to true (which always does), leading to an infinite loop.

Q111.What will be the output of the following pseudocode?

```
integer a,b
Set a = 2, b = 90
while(b>9)
a = b% 2 + a
if(a% 2! = 0)
Print a
else
Print b
b = b / 2
End while
```

A. 3 90 11 3

B. 11 3 3 90

C. 90 3 3 11

D. 3 3 90 11

Answer: 90 3 3 11

Explanation: The loop iterates while b > 9 In each iteration, a is updated as a = b % 2 + a, and either a or b is printed based on whether a is odd or even. The sequence results in 90 3 3 11

Q112.What will be the output of the following pseudocode?

```
integer a,b,c,x,y,z,p,q,r
Set x=5, y = 10 ,z = 15,
Set p = 10 ,q = 20 ,r = 30
a = x + p
b =y * q
c = r / z
Print a b c
```

A. 15 200 0

B. 15 200 20

C. 15 200 2

D. 15 20 2

Answer: 15 200 2

Explanation:

a = x + p = 5 + 10 = 15

b = yq = 10 * 20 = 200

c = r / z = 30/15 = 2

The output will be 15 200 2.

Q113. What will be the output of the following code.

```
#include<stdio.h>
int fun(int i)
{
if(i==0) return 0;
else if(i%2==0)
return fun(i-1);
else
return fun(i-1);
}
int main()
{
```

```
int a=11;
printf("%d",fun(a));
}
```

A. 109876

B. 10

C. 0(Zero)

D. 1

Answer: 0(zero)

Explanation: The function fun() recursively calls itself regardless of whether i is even or odd, but without any operation on the value of i. Eventually, it reaches the base case i == 0 and returns 0. Hence, the output is 0.

Q114.Consider the following given code and predict its output.

```
main()
int num[]=( 1, 4, 8, 12, 16 )
int *a,*b;
int i;
a = num
b = num + 2
i = * a++;
printf("%d,%d,%d\n", i, *a, *b);
```

A. 1,4,8

B. 4,1,8

C. 2,1,8

D. 4,4,8

Answer: 1,4,8

Explanation:

a = num points to the first element, and b = num + 2 points to the third element.

i =^ * a++ assigns the value of "a (which is 1) to i, then increments a to point to the next element.

After the increment, *a refers to 4, and "b refers to 8. The output is 1, 4, 8.

Q115.What will be the output of the following code?

```
#include<stdio.h>
int main ()
{
int x = 4, y = 0;
int z;
z = (x++ + ++y + y++, x++);
printf ("%d\n", z);
return 0;
}
```

A. 5

B. zero -'O'

C. compiler error

D. undefine behavior due to the order of evolution can be different

Answer: 5

Explanation: The expression z = (x+++++y+y++, x++) evaluates the second operand, x++, which is 5, and assigns it to z. Hence, the output is 5.

Q116.What will be the output of the following C code?

```
#include <stdio.h>
int f(int n){
if (n==0) return 1;
else return n+f(n-1); }
int main
 { printf ("%d", f (10));
return 0;
}
```

A. compile time error

B. infinite loop

C. 56

D. 55036674

Answer: 56

Q117.What will be the output of the following C code? [assume it is a 64 bit-computer]

```
#include <stdio.h>
struct node
{
int data;
int *pointer;
};
int main ()
{
node m;
printf ("%d", sizeof (m));
return 0;
}
```

A. 4

B. 12

C. 16

D. 5

Answer: 16

Explanation: The node structure contains an int (4 bytes) and an int* (8 bytes on a 64-bit system). The total size is 12 bytes, but due to padding for alignment, the structure size becomes 16 bytes.

Q118.What will be the output of the following code?

```
#include<stdio.h>
int main (){
int no 1112, temp, digit, sum = 1;
temp = no;
while (no > 0){
digit no % 10;
sum = sum * digit;
no /= 10;
printf ("%d\n", sum);
return 0; } }
```

A. 25

B. 7

C. 5

D. 2

Answer: 2

Explanation: the sum is calculated as 1 * 2 (the last digit), which results in 2.

Q119.What will be the output of the following pseudocode

```
integer a, b, c;
set a = 11 ,b = 12 ,c = 10
if (b > 0) b++
else att
end if
for (each b from 0 to 5)
a = a + 1
end for
print (a + c)
```

A. 27

B. 20

C. 22

D. 24

Answer: 27

Explanation:

b++ increments b to 13.

The for loop runs from 0 to 5, incrementing a 6 times (11 + 6 = 17).

The final print statement outputs a + c which is 17 + 10 = 27.

Q120. What will be the output of the following pseudocode?

```
if (9 > 6 || (2 == 3 && 4 > 1))
print "First"
else
print "Second"
```

A. First

B. Second

C. Error

D. None of the above

Answer: First

Explanation: 9 > 6 is true, so the OR condition makes the overall condition true, and "First" is printed.