INGENIERÍA
EN AUTOMATIZACIÓN

45 +1.5 Codigo

First Quiz Advanced Programming
Student: Diego Joel Zuñiga Fragoso

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Group: 32

**1. Perform the following operations and write the result in the requested format (1.0 points)**

a) $35 - 112 = X_{16(ca2)}$
b) $123 - 0xE1 = X_{8(ca2)}$
c) $063 + 135 = X_2$ → 11000110
d) $0xEFE - 681 = X_8$

**2. The next code was created in DEV-C++ like C program, analyze it and say: (0.5 points)**

```
#include "iostream"
#include <stdio.h>
int main() {
  printf("Hola Mundo");
}
```

a) The program will run correctly
b) The program will not run since it must have a return.
c) The program cannot contain C++ libraries
d) The iostream library was declared incorrectly

**3. Given the next code, Which is the return with end the execution? (0.5 points)**

```
int main(){
    std::cout << "Hola Mundo";
    return -5;}
```

a) Return 5
b) Must return cero, have a syntaxis error
c) Return FFFB
d) Retuning data error

**4. What is the output value on the screen? (0.5 points)**

```
#include<stdio.h>
int X=40;
int main(){
    int X=20;
    float x=10.0;
    printf("%i\n", x);
    return 0;}
```

10
-

**5. What will be the output of the program ? (0.5 points)** 0.5

```
#include <stdio.h>
void main(){
  int mat1[3][3] = {   10,20,30,
                       40,50,60,
                       70,80,90 };
  printf("\n%i", **mat1 + 5);}
```

15

**6. What will be the output of the program ? (0.5 points)** 0.5

```
#include <stdio.h>
void main()
{
  int i, j;
  j = 1;
  for (i = 1; i < 8; i++)
        j <<= 1;
  printf("%X\n", j);
}
```

80
-

**7. What is the output value on the screen? (0.5 points)** 0.5

```
#include <stdio.h>
void main()
{
  unsigned int s;
  s = (~0xFFFF80A5 | 0xF) ^ (0x58 &
0b00101101);
  printf("Valor: %x", s);
}
```

Valor: 7F57

**8. What is the output value on the screen? (0.5 points)**

```
#include <stdio.h>
void main() {
    int a = 5, * q1;
    char **q2;
    q1 = &a; q2 = (char**)&q1;
    printf("%d\n", **q2 << 1);}
```

1

**9. Which of these statements are incorrect? (0.5 points)** 0.25

a) int *p, a, i;
b) double& y;
c) char q, * d;
d) float* z = &x;
e) char const *j = 4;

Diego Joel Zuñiga Fragoso

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**10. What is the output value on the screen? (0.5point)** 0.5

```
#include <stdio.h>
#include "conio.h"
void main()
{
  int adc = 512;
  float v;
  v = (adc * 5.0)/1023;
  printf("Valor: %3.2f",v);
}
```

Valor: _ _ 2.50 (espacios vacíos)

**11. What is the output value on the screen? (0.5 point)** 0.5

```
#include <iostream>
using namespace std;
void main()
  {
  const char* c[] = {"1,2,3","2,4,6" };
  cout << **c << "," << *(*(c+1));}
```

1,2

**12. Given an array v with the following definition: (0.5 points)** 0.25

```
int v[] = { 10, 20, 30, 40 }, i, *pv;
```

What screen output is caused by the following statements?

a)
```
for( pv = v; pv <= v + 3; pv++ )
cout << " *pv = " << *pv;
```
3 veces: *pv = 10 *pv = 20 *pv = 30

b)
```
for( pv = v, i = 1; i <= 3; i++ )
cout << " pv[i] = " << pv[i];
```
pv[1] = 20 pv[1] = 30 pv[1] = 40

c)
```
for( pv = v, i = 0; pv+i <= &v[3]; pv++,i++)
cout << " *(pv + i) = " << *(pv + i);
```
*(pv+i) = 10 *(pv+i) = 30

d)
```
for( pv = v + 3; pv >= v; --pv )
cout << " v[" << (pv-v) << "] = "<< v[pv - v];
```
v[3] = 40 v[2] = 30 v[1] = 20

**13. What is the output value on the screen? (0.5 point)** 0

```
#include <iostream>
#include <math.h>
#define f1(A) A*A-4.3
using namespace std;
void main()
{
  double a = 3.5;
  cout << f1(a) << endl;
}
```

6.45

**14. What is the output value of the next code? (1.0 point)** 0

```
#include <stdio.h>
int main(void){
int i, j, k = 2, l = 7;
i = 9 + 3 * 2;
j = 8 % 6 + 4 * 2;
i %= ++j;
printf("\nValue: %i", i);
++l;
--k -= l++ * 2;
printf("\nValue%i", k);
i -= 5.5 - 3 * 2 % 4;
j += (i++ * 2 - (k += 3, --k));
printf("\nValue: %i", j);}
```

i=15 % 11 i = 4

Value: 4

l = 8

Error de compilación

**15. What will be the output of the next program? (0.5 points)** 0

```
#include <iostream>
using namespace std;
void main()
{
char* o, * u;
char q[20];
char p[] = { "HOY PASARE" };
o = p;
u = q;
for (; *o != '\0'; u++, o++)
      *u = (*o != ' ') ? *o : '\0';
printf("%s %c%c",q, *p+6,*(p+1));}
```

**16. Make a code that allows a user to enter a number(N) and generate an output to print on screen a text with the next format (1.5 points)**

| | | | |
|---|---|---|---|
| 1 | | | |
| 2 | 4 | | |
| 3 | 6 | 3 | |
| 4 | 8 | 12 | 16 |
| … | | | |
| N | N+N… | | N*N |

1.5

En parte de ↑ atrás

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1: 35 - 112 = -77

63 + 135 = 198

1 1 0 0 0 1 1 0

128 64 32 16 8 4 2 1

7: !(1111 1111 1111 1111 1000 0000 1010 0101)

= 0000 0000 0000 0000 0111 1111 0101 1010

or → 0000 0000 0000 1111

0111 1111 0101 1111

∧ 0000 0000 0000 1000

0111 1111 0101 0111

7 F 5 7

& 0101 1000

0010 1101

0000 1000

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(10)

$$\begin{array}{r} 512 \\ \times\ 5 \\ \hline 2560 \end{array}$$

$$\begin{array}{r|l} 1023 & 2560 \\ \cline{2-2} & 5740 \\ & 250 \end{array} \quad 2.50$$

$$\begin{array}{r} 1023 \\ \times\ 5 \\ \hline 5115 \end{array}$$

(13) $3.5 \times 3.5 = 10.75 - 4.3 = 6.45$

(16)

```
#include <stdio.h>
#include <iostream>
using namespace std;
Void main()
{
  int N;
  cout << " Ingrese el numero N: ";
  cin >> N;
  For (int i=1 ; i<=N ; i++)
  {
    For(int j=1 ; j<=i ; j++)
    {
      printF(" %i \t", i*j);
    }
    cout << endl;
}
```