C PROGRAMMING SECOND SESSION QUIZ

QUESTIONS

1. Which of the following special symbol allowed in a variable name?

   A. * (asterisk)
   B. | (pipeline)
   C. - (hyphen)
   D. _ (underscore)

2. Assunming, integer is 2 byte, What will be the output of the program?

```
#include<stdio.h>

int main()
{
    printf("%x\n", -1>>1);
    return 0;
}
```

   A. ffff
   B. 0fff
   C. 0000
   D. fff0

3. If an `unsigned int` is 2 bytes wide then, What will be the output of the program ?

```
#include<stdio.h>

int main()
{
    unsigned int m = 32;
    printf("%x\n", ~m);
    return 0;
}
```

   A. ffff
   B. 0000
   C. ffdf
   D. ddfd

4. What will be the output of the program?

```
#include<stdio.h>

int main()
{
    unsigned char i = 0x80;
    printf("%d\n", i<<1);
    return 0;
}
```

   A. 0
   B. 256
   C. 100
   D. 80

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5.

What will be the output of the program?

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

A. -2, 3, 1, 1
B. 2, 3, 1, 2
C. 1, 2, 3, 1
D. 3, 3, 1, 2

6. i=4 , j=7
   X=j || i++ && 1;
   What are the values of I,x? i=4 , x= ?
   - A. i=5 , x=1
   - B. 5 7
   - C. 4 1
   - D. 4 7

7. X=2*3+4*5 ,, x= ?
   - A. 26
   - B. 50
   - C. 125
   - D. 40

8. x=x ^ (1<<2) ,, //// ^ means XOR
   This line :
   a. Set Bit 5 of x
   b. Clear Bit 3 of x
   c. Toggle bit 3 of x
   d. Toggle bit 2 of x

```
#include "stdio.h"

int main ()
{
    unsigned int x = 1; //Declaration & initialization
    printf ("x variable = %d   %d",++x , x++);
    return 1;
}
```

11.what will be the output

a. 3 1
b. 2 2
c. 2 3
d. 3 2

9.

What would be the output of the following program?

```
main( )
{
    int i = 2 ;
    printf ( "\n%d %d", ++i, ++i ) ;
}
```

A. 3 4
B. 4 3
C. 4 4
D. Output may vary from compiler to compiler.

10.

What would be the output of the following program?

```
main( )
{
    int i = -3, j = 2, k = 0, m ;
    m = ++j && ++i || ++k ;
    printf ( "\n%d %d %d %d", i, j, k, m ) ;
}
```


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ANSWERS

```
5  int main ()
6  {
7      unsigned int x = 1; //Declaration & initia
8      printf ("x variable = %d   %d",++x , x++);
9      return 1;
10 }
11
```

11.a

```
please enter the x value
x variable = 3   1
```

1. D
2.

Answer: Option **A**

Explanation:

Negative numbers are treated with 2's complement method.

1's complement: Inverting the bits (all 1s to 0s and all 0s to 1s)
2's complement: Adding 1 to the result of 1's complement.

```
Binary of 1(2byte)     :  0000 0000 0000 0001
Representing -1:
1s complement of 1(2byte)    : 1111 1111 1111 1110
Adding 1 to 1's comp. result : 1111 1111 1111 1111
Right shift 1bit(-1>>1): 1111 1111 1111 1111 (carry out 1)
Hexadecimal              : f   f    f    f
(Filled with 1s in the left side in the above step)
```

3. C
4. A (embedded C)overflow
5.

Answer: Option **A**

Explanation:

Step 1: `int i=-3, j=2, k=0, m;` here variable `i, j, k, m` are declared as an integer type and variable `i, j, k` are initialized to -3, 2, 0 respectively.

Step 2: `m = ++i && ++j && ++k;`
becomes `m = -2 && 3 && 1;`
becomes `m = TRUE && TRUE;` Hence this statement becomes TRUE. So it returns '1'(one).
Hence m=1.

Step 3: `printf("%d, %d, %d, %d\n", i, j, k, m);` In the previous step the value of i,j,k are increemented by '1'(one).

Hence the output is "-2, 3, 1, 1".

6. C (Optimization)
7. A
8. D
9.

D. The order of evaluation of the arguments to a function call is unspecified.

10.

-2 3 0 1

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