CS101-Introduction to Computing and Programming

Fall 2016, Mid Term Examination

Total Marks = 40

Max. Time 60 minutes

Name: _____
Reg. No: _____
Section: _____
Faculty: _____

CS101 - MCQs Answer Sheet

1. All the answers should be marked in this sheet
2. **Please write down/encircle the letter for the best choice in the answer grid.**
3. **In case you cannot convince yourself that a logical choice is present in the answer sheet, you can write your own answer at your own risk.**
4. This sheet MUST NOT be detached from the question paper and should be submitted back with the question paper.

Questions											
MCQ#						**MCQ#**					
1	a	b	c	d		**21**	a	b	c	d
2	a	b	c	d		**22**	a	b	c	d
3	a	b	c	d		**23**	a	b	c	d
4	a	b	c	d		**24**	a	b	c	d
5	a	b	c	d		**25**	a	b	c	d
6	a	b	c	d		**26**	a	b	c	d
7	a	b	c	d		**27**	a	b	c	d
8	a	b	c	d		**28**	a	b	c	d
9	a	b	c	d		**29**	a	b	c	d
10	a	b	c	d		**30**	a	b	c	d
11	a	b	c	d		**31**	a	b	c	d
12	a	b	c	d		**32**	a	b	c	d
13	a	b	c	d		**33**	a	b	c	d
14	a	b	c	d		**34**	a	b	c	d
15	a	b	c	d		**35**	a	b	c	d
16	a	b	c	d		**36**	a	b	c	d
17	a	b	c	d		**37**	a	b	c	d
18	a	b	c	d		**38**	a	b	c	d
19	a	b	c	d		**39**	a	b	c	d
20	a	b	c	d		**40**	a	b	c	d
Sample	a	ⓑ	c	d		**Sample**	a	b	©c	d

Question 1: What will be the output of the following code?
```
for (int x = - 5; x <= 4 ;   ++x);
```

   a) 0 (there is an error)
   b) infinite (there are no statements in the for loop)
   c) 10 times
   d) 9 times

Question 2: What will be the output of the following code?
```
for (int number = 1 ;   number != 10 ; number += 2 )
{
        cout  <<  number  << "   " ;
}
```
   a) 1 3 5 7 9
   b) 2 4 6 8 10
   c) Logical error/Infinite loop
   d) Syntax error

Question 3: What will be the output of the following code?
```
        int n = 1;
        for ( int y = 0;   y  <  5 ;   y++ ,   n++) {
            cout  <<  "\n";
            for ( int x = 0; x < n;   x++) {
                cout  <<  "*";
            }
        }
```
   a) 5
   b) 10
   c) 15
   d) 20

Question 4: What will be the output of the following code?
```
      for ( int i =1; i < 10; i++ ) {
            int j = 5;
              if (i % j)
                  continue;
                  cout  <<  i  << "   ";
        }
```
   a) 2 3 4 5
   b) 3 4 5
   c) 4 5
   d) 5

Question 5: What will be the output of the following code?
```
int i;   int a = 10, b=5;
for (int i=0, j=b; i<a, j>0; i++, j--)
{
      cout << "value of a: " << a << endl;
      a = a + b;
      b++;
 }
```
What will be the last line printed?
   a) value of a: 10
   b) value of a: 15

---

c) value of a: 21
d) value of a: 36

Question 6: What will be the output of the following code?
```
int i;
for ( i =1; i <=10; i++ );
        cout<<i;
```
a) 12345678910
b) 1234567891011
c) 10
d) 11

Question 7: What will be the output of the following code?
```
int i=1;
 for ( ;   ; )
        {
                cout<<i;
                if(i==5)
                break;
                i++;
        }
```
a) 1
b) Syntax Error
c) Infinite Loop
d) 12345

Question 8: What will be the output of the following code?
```
int i=10, j=2, NUM=4;
for( ; i/3 <= NUM;)
  {
     cout<< (++i) * 2<<" ";
  }
```
a) 22 24 26
b) 24 26 28
c) 22 24 26 28 30
d) Nothing…the loop will not execute even once

Question 9: What will be the output of the following code?
```
int a = 10;
for (int i=10, j=0; i<=10 && j>=0; i++, j++)
    {
       cout<<a%10;
    }
```
a) 0
b) Infinite loop
c) Nothing
d) 10

Question 10: What will be the output of the following code?
```
int a = 10;
for (int i=0; i<5; i++)
    {
       if((++i)/2==0)
        continue;
```

```
cout<<a<<" ";
  }
```
a) **10 10**
b) 10 10 10
c) 0 1 2 3 4
d) 10 10 10 10 10

Question 11: What is printed on the screen after the following piece of C/C++ is executed?
```
int a, b, x;
a = 15; b = 10;
x =  a / b;
if (x != 0)
        x--;
else
        x++;
cout<<x;
```
  a) 2
  b) 2.5
  c) 0
  d) 0.5

Question 12: What is printed on the screen after the following piece of C/C++ is executed?
```
int a, b, x;
a = 12; b = 6;
x =  a % b;
if (x == 2)
      x -= 2;
else
    x += 2;
cout<<x;
```
  a) 2
  b) -2
  c) 0
  d) 4

Question 13: What is output of the following code ?
```
int num = 10;
if (num <=10)
        num =   num - 4;
if (num >= 6)
        num--;
if (num == 5)
      num =   num+10;
cout<< ++num;
```
  a) 6
  b) 10
  c) 15
  d) 16

Question 14: What is output of the following code ?
```
float a, b, x;
a = 2; b = 3;
x =  a - b * a /3;
if (!x)
      x = x + 1;
```

```
    else
        x = x - 1;
    cout<<x;
```
(a) -1

(b) 1

(c) 0

(d) Error

Question 15: What will be the output of the following code?
```
int num = 5;
if (num>0) {
   cout<<"The number is a Positive Number\n";
   if (num >= 5)
     cout<<"The number is greater than or equal to five\n";
     else if (num < 5)
        cout<<"The number is less than five\n";
     else if (num = 5)
        cout<<"The number is equal to five\n";
 }
```
(a) The number is a Positive Number

(b) The number is a Positive Number
The number is equal to five

(c) The number is a Positive Number
The number is greater than or equal to five

(d) The number is a Positive Number
The number is less than five

Question 16: What will be the output of the following code?
```
    int a = 7,b = 6,c = 4,d = 3;
    if(a < b || !(c > d))
        cout<<" The condition is satisfied\n";
     else
        cout<<" The condition is not satisfied\n"
            <<" Try again";
```
(a) The condition is satisfied

(b) The condition is satisfied
Try again

(c) The condition is not satisfied

(d) The condition is not satisfied
Try again

Question 17: What will be the output of the following code?
```
    int a = 7,b = 6,c = 4,d = 3;
      if(a != b && !(c < d))
        cout<<" The condition is satisfied\n";
      else
        cout<<" The condition is not satisfied\n";
        cout<<" Try again";
```
(a) The condition is satisfied

(b) The condition is satisfied
Try again

(c) The condition is not satisfied

(d) The condition is not satisfied
Try again

Question 18: What is the screen output of following code?

```
int grade = 100;
if (grade == 100)
     cout<<"You are a genius";
     cout <<"\nGreat job";
else
     cout<<"You failure";
     cout <<"\nBetter work hard";
```

(a) You are a genius
Great job
You failure
Better work hard
(b) You are a genius
Great job
Better work hard
(c) You are a genius
Great job
(d) syntax error

Question 19: Output of following code will be:

```
char grade = 'A';
switch(grade){
case 'a':
     cout<<"Vow ! You have got an a\n";
case 'A':
     cout<<"Vow ! You have got an A\n";
     break;
case 'b':
     cout<<"Grade b, Well done !\n";
case 'B':
     cout<<"Grade B, Well done !\n";
     break;
case 'C':
     cout<<"Grade C, Just fine\n";
default:
     cout<<"Not a valid grade\n";
}
```

a) Vow ! You have got an A
b) Vow ! You have got an a
Vow ! You have got an A
c) Vow ! You have got an a
Vow ! You have got an A
Not a valid grade
d) Vow ! You have got an A
Not a valid grade

Question 20: Output of following code will be:

```
char grade = 'c';
switch(grade){
case 'a':
case 'A':
     cout<<"Vow ! You have got an A"<<endl;
```

```
            break;
        case 'b':
        case 'B':
            cout<<"Grade B, Well done !"<<endl;
            break;
        case 'C':
            cout<<"Grade C, Just fine"<<endl;
            break;
        default:
            cout<<"Not a valid grade"<<endl;
        }
```
a) Grade C, Just fine
b) Not a valid grade
c) Error
d) Grade C, Just fine
   Not a valid grade

Question 21: Output of following code will be:
```
        char grade = 'b';
        switch(grade){
        case 'a':
            cout<<"Vow ! You have got an a\n";
        case 'A':
            cout<<"Vow ! You have got an A\n";
            break;
        case 'b':
            cout<<"Grade b, Well done !\n";
        case 'B':
            cout<<"Grade B, Well done !\n";
            break;
        case 'C':
            cout<<"Grade C, Just fine\n";
        default:
            cout<<"Not a valid grade\n";
        }
```
a) Grade b, Well done !
b) Grade b, Well done !
   Grade B, Well done !
c) Grade b, Well done !
   Grade B, Well done !
   Not a valid grade
d) Grade b, Well done !
   Not a valid grade

Question 22: What is the output of the following code?
```
        int a=2, b=4;
        cout<<a++ + ++b;
```
   a) 8
   b) 7
   c) 6
   d) 9

Question 23: What value of d is computed by the following code?

```
int a=1, b=-1, c=1, d;
d = a + b && c;
```
a) 0
b) False
c) 1
d) True

Question 24: What is the output of the following code?
```
int a=-1;
if(a++)
        cout<<"Inside.";
cout<<" a="<<a;
```
a) a=0
b) Inside. a=-1
c) Inside. a=0
d) a=-1

Question 25: Which of the following operators has the highest precedence?
```
! (Logical Not), + (Addition), * (Multiplication), && (Logical
And)
```
a) &&
b) +
c) *
d) !

Question 26: What value of x is computed by the following code?
```
int a=2, b=10, c=2, d=4, x;
x = a%b*c/d;
```
a) 0
b) 1
c) 2
d) 3

Question 27: What is the truth value of the following expression?
```
(4<3) && (4<3) || (3<4)
```
a) True
b) False
c) Not a logical expression
d) None of the above

Question 28: What values of a, b, c will make the following expression false.
```
b || !c && d
```
a) b=-1, c=0, d=1
b) b=1, c=1, d=0
c) b=0, c=0, d=1
d) b=0, c=1, d=1

Question 29: What are the values of a and b computed by the following code?
```
int a=3, b=5;
a*=b++;
```
a) a=18, b=5
b) a=18, b=6

c) a=15, b=5
d) a=15, b=6

Question 30: What are the values of a and b computed by the following code?
```
int a=3, b=5;
a*=++b;
```
a) a=18, b=5
b) a=18, b=6
c) a=15, b=5
d) a=15, b=6

Question 31: What is the value of c computed by the following?
```
int a=3, b=5, c;
c = b > 3 + 2;
```
a) 3
b) 1
c) 0
d) 5

Question 32: ------------ is volatile memory

a) RAM
b) ROM
c) Hard Disk
d) CD ROM

Question 33: What's wrong with the following statement?
```
while( (i < 10) && (i > 24))
```
a) the logical operator && cannot be used in a test condition
b) the while loop is an exit-condition loop
c) the test condition is always false
d) the test condition is always true

Question 34: What is the output of the following code?
```
int x=0;
while(x<3)
{
    for(int y=0;y<2;y++)
       cout<<++x<<" ";
 x++;
}
```
a) 0 1 2 3
b) 0 1 3 4
c) 1 2 3 4
d) 1 2

Question 35: How many times does the following loop executes?
```
int  x=-5;
while (x<5);
x++;
```
a) 0 (there is an error)
b) infinite (there are no statements in the loop)
c) 10 times

d) 9 times

Question 36: How many times will the following while loop run?
```
int x=0,y=1;
while(x<100)
{
   x+=y*y;
   y+=x*x;
}
```
a) 0
b) 1
c) 2
d) 3

Question 37: What is the output of following code?
```
int main()
{
int x=0;
do
    {
cout<<++x<<",";
    }
while(x<=10);;;
system("pause");
return 0;
    }
```
a)   1,2,3,4,5,6,7,8,9,10,11,
b)   11,
c)   Syntax error
d)   1,2,3,4,5,6,7,8,9,10,

Question 38: The component of the central processing unit that performs logical operations, stores data and keeps results during the processing is called the:

   a) Arithmetic/Logic unit.
   b) Control unit
   c) Main memory
   d) Micro processing chip

Question 39: The decimal equivalent of binary 1000 is

   a) 7
   b) 8
   c) 9
   d) 10

Question 40: Applications talk to devices through the OS and the part of the OS that manages devices is called the _____.

   a) File System
   b) Application Interface
   c) Kernel
   d) Device Driver

££333££££ EXTRA========********
6. What is the output of following code:

```
#include<iostream>
using namespace std;
int main()
{   int y = 3;
int x=0;
do
   {
x++;
}while ( y=y/3 );
cout<<x<<endl;
system("pause");
return 0;
   }
```

[a]   Compile time error
[b]   Infinite loop
[c]   2
[d]   1

7. What is the output of following code:

```
#include<iostream>
using namespace std;
int main()
{   int i=2,j=3;
do
   {
cout<<i<<'\t'<<j<<endl;
}while(--i&&j++);
system("pause");
return 0;
   }
```

[a]	1	3
	0	3
[b]	2	3
	1	4
[c]	2	4
	1	5
[d]	Compilation error	

8. What is the output of following code:

```
int main()
{   int i = 0;
do
   {
cout<<"Hello";
   } while (i != 0);
system("pause");
return 0;
   }
```

[a]   Nothing is displayed

[b]   Infinite loop
[c]   Hello
[d]   Run time error

9. What is the output of following code:
```
#include<iostream>
using namespace std;
int main()
{
int x=0;
do
    {
cout<< --x + x++<<",";
    }
while(x<=10);
system("pause");
return 0;
    }
```

[a]   -1,-1,-1,-1,-1, …. (infinite loop)
[b]   -2,-2,-2,-2,-2, … (infinite loop)
[c]   Syntax error
[d]   0,0,0,0,0,0,0,0 … (infinite loop)

Question: _____ is readily understood by microprocessors and this language is very difficult to write for human programmers.

   a) English Language
   b) High Level Language
   c) Machine Language
   d) Assembly Language

Question: Which of the following is a type of system software?

   a) Device driver
   b) Word processor
   c) Write once read-only-memory
   d) Anti-Virus

Question: What is internet?

   a) A Software used to connect to some network
   b) A group of users
   c) Any network of more than two computers
   d) A global network of networks

Question: Which of the following is called the brain of computer?

   a) Motherboard
   b) Slots
   c) Processor
   d) Power supply

Question: The binary equivalent of decimal 1234 is

a) $(1111101000)_2$
b) $(01111011)_2$
c) $(10011010010)_2$
d) $(10011010011)_2$

Question: When the Operating System (OS) is first started, control is first transferred to _____ which uses a small program called _____ to load the OS from the Hard Disk

a) RAM, Kernel
b) Processor, Windows
c) Hard Disk, Kernel
d) ROM (or BIOS), BootStrap (or Bootloader)