Shah Jalal University of Science & Technology, Sylhet
Department of Computer Science & Engineering
2nd year 2nd semester Final Examination 2015
Course ID:CSE-203Z (Introduction to Computer Language)
Full Marks: 50   Time: 2 Hours
(Answer any 4 questions taking 2 questions from each group)

Part:A

1. a) Find out the errors and correct them(write the codes first and correct side by side): `3`

```
#include<stdio.h>
main
{int ch;
ch=getchar;
switch(ch){
  Case 'A'; printf("%s",black);
  Case 'B';printf("%s",ball);
else;
printf("Error in choice");}}
```

   b) Distinguish between x-- and --x with an example. `3`

   c) How are comments used in a C program? Give an example. `2`

   d) Write a program that takes a character and displays 10 consecutive characters including it and their ASCII values as well. `4.5`

2. a) Write some output functions and their prototypes? `2`

   b) Assume a=5, b=10, c=.001, d='a'. Find out the value of following codes: `1.5*2=3`
       i) b*=a>b?a+1:++b
       ii) (a<b) && (c>1)|| (d<'b;)

   c) Write which are invalid identifiers and why? `2.5`
       i.   _IpGe
       ii.   break
       iii. Cat dog
       iv.   go_to
       v.   Float

   d) write TRUE/FALSE against each of the following statements. `5`
       i.   for(i=.....;i<=..... ;i++)------here i can be any datatype.
       ii. enum is a keyword.
       iii. modulus of a floating point variable is possible.
       iv. >= is an assignment operator.
       v.   ++I; is a statement

Q3 a) i)Draw the output:

```
#include<stdio.h>
main()
{int i,j,k,r;
scanf("%d",&r);

for(i=1;i<=r;i++){
    for(j=r-i;j>=0;j--)printf(" ");
for(k=1;k<=2*i-1;k++)printf("*");

printf("\n");
}
}
```

   ii)Write codes for the following sample output where number of rows will be given by user: `6+5`

```
1
22
333
4444
```

   b) If there is a valid statement "X=0XFFFUL" in a program, what is the data type of a variable X? `1.5`

Part:B

4. a) Mention all types of unary operators. Give an example that uses sizeof operator. `3.5`

   b) Find the output of the following C code: `5`

```
#include<stdio.h>
main()
{ int i;
for(i=1;i<=16;i++)
   {if(i%5==0)
   ++i;
continue ; }
printf("%d\n",i); }}
```

   c) Convert 110_{10} to its corresponding octal and hexadecimal. `2.5*2`

       i) α-amylase
       ii) acid phosphatase `6.0`
       iii) lactate dehydrogenase

   d) What does increases activity of AST in plasma. `4.0`

5. a) Define a structure type variable of a student record (including Name , Roll,Credit).   1.5
   b) Subtract 110111_{10} from 1011100_{10} using 2's complement method.   3
   c) Define the output of the following C code where scanf values are 3,1,4,2,0 respectively.   3.5

```c
#include<stdio.h>
void main()
{int i=0,p[]={12,23,44,2,7},x[5];
while(i<=4)
{scanf("%d",&x[i]);
 i++;}
 printf("the value of array's are:");
for(i=0;i<=4;i++)
printf("%d\t",p[i]-x[i]);}
```

   d)   5

```c
Define the output of the following C code:
//include<stdio.h>
void main()
{int x=0,y=0;
  while(x<20)
  {x=y++;
   printf("%d",y);

  ++x;
}}
```

6. a) Add two matrix of 2 rows and 3 columns using C code.   4.5
   b) How are library functions accessed?   1
   c) Write the first line of the function definition, including the formal argument declarations, for each of the situation described below   1*2=2
   i) a function called root accepts two integer arguments and returns a floating point result.
   ii) a function called process accepts an integer and two floating point quantities and return a double precision quantity.

   d) Describe the output corresponding to the 1,2,3,4 lines of the following C code: 5

```c
#include<stdio.h>
      main()
      {int a;
         char c[4];
1.       for(a=0;  ;++a){
         gets(c);
2.       if(strcmp(c,"cse")==0)
3.          printf("%s",c);
4.       break;
          }
```