M.C.A. (First Semester) Esamination, 2014

ADVANCED PROGRAMMING In 'C' LANGUAGE

Paper : MCA-103

Section-A

1.

(I)   getch() function hold consol screen until any key is not press. This function also show the press character when we press Alt +F5 key

getchar() function hold consol screen until we press enter key it only takes single character and it also show the press character when we press

(II)

The **break** statement in C programming language has the following two usages:

1. When the **break** statement is encountered inside a loop, the loop is immediately terminated and program control resumes at the next statement following the loop.
2. It can be used to terminate a case in the **switch** statement (covered in the next chapter).

If you are using nested loops (i.e., one loop inside another loop), the break statement will stop the execution of the innermost loop and start executing the next line of code after the block.

(III)

When the preprocessor finds an #include directive it replaces it by the entire content of the specified header or file. There are two ways to use #include:

```
1 #include <header>
2 #include "file"
```

In the first case, a *header* is specified between angle-brackets <>. This is used to include headers provided by the implementation, such as the headers that compose the standard library (iostream, string,...). Whether the headers are actually files or exist in some other form is *implementation-defined*, but in any case they shall be properly included with this directive.

The syntax used in the second #include uses quotes, and includes a *file*. The *file* is searched for in an *implementation-defined* manner, which generally includes the current path. In the case that the file is not found, the compiler interprets the directive as a *header* inclusion, just as if the quotes ("") were replaced by angle-brackets (<>).

(IV) Malloc function is use for dynamic memory allocation. Though this function a block of memory may be allocated.

int x;

x= int(*) malloc (100*sizeof(int));

(V) For converting upper case to lower case we can use strlwr() function.

(VI) Conditional operator is pair of "?:"

exp1 ? exp2 : exp3

where exp1, exp2 and exp3 are expressions

if exp1 is true than exp2 is evaluated otherwise exp3 is evaluated.

(VII) String is set of character. In C language string is not a data type. In C string is a character array.

Example char a[5];

(VIII) The output of 1101^1001 is 0100.

(IX) Size of float variable is 8 byte.

(X) Pre increment operator is ++ , the variable is incremented first and the then the expression is evaluated using the new value of the variable.

example:- ++x;

Section-B

2 You should explain conditional statements with syntax and example on that points.

      I   simple if
     II   if.......else
    III   if.......elseif
    IV   nested if
     V   switch case

3 You should write what is array , one dimension array , two dimension array. How to declare one dimension and two dimension array and how to initialize and you should also write the position of each element .

4 You should write a program for passing structure though function and explain this program.

(Refer:- page no. 334 Book name :- Programming in ANSI C fifth Edition)

5 You should explain dynamic memory allocation with the following points with syntax and example.

    1. malloc

    2. calloc

    3. free

    4. realloc

6 You should write one program to read the content from file and explain this program in brief.

(Refer:- page no. 427 Book name :- Let Us C 12th Edition)

7   You should write program for concatenation of two string and explain the program.

For Example:-

```c
//string concatenation program

#include<stdio.h>

#include<conio.h>

void main()

{

char str1[20];

char str2[10];

int i,j,l=0,k=0;

clrscr();

gets(str1);

gets(str2);

while(str1[l]!='\0')

l++;


while(str2[k]!='\0')

{

str1[l+k]=str2[k];

k++;

}
```

str1[l+k]='\0';

puts(str1);

getch();

}

8 You should write that program using switch case and explain this program in brief.

(For switch case example :-Refer:-   page no. 131,132 Book name :- Programming in ANSI C fifth Edition)