2014

(First Semester)

MASTER OF COMPUTER APPLICATIONS

Paper No: MCA 102

(Programming in C)

Full Marks : 60

Time : 3 hours

The figures in the margin indicate full marks for the questions

Answer Question No 1 and **any four** from the rest

1. (a) What are commond line arguments? (2)

(b) What is the difference between an array of pointers and pointer to an array? (2)

(c) What will be the output of the following C segment:- (2)

```
main ( )
{   char xh='A';
    printf("%c\n%3c\n%5c\n",xh,xh,xh);
    printf("%3c\n%c\n",xh,xh);
}
```

(d) Why is the header file stdio.h frequently used in C language? (2)

(e) What will be the output of the following C segment:- (2)

```
main( )
{
    char str[ ]="CAUTION";
    char *p;
    p=str+5;
    printf("%c\n",*p--);
    printf("%c",*p);
}
```

(f) Identify the error in the following program:- (2)

```
int i = 0; i = i + 1;
cout<< i << " ";
/* comment \*// i = i + 1;
cout<< i ;
```

2. (a) Explain with examples the difference between: (2X3=6)

i) printf() and fprintf()
ii) getch() and getchar()
iii) fseek() and rewind ()

(b) What do you mean by recursive function? Write a program to generate the following series using recursive function:

0 1 1 2 3 5 8 13 . . .n (1+5=6)

3. (a) What is the difference between the functions strcmp() and stricmp()? Write a program to read two strings and compare them using the function strncmp() and print a message that the first string is equal, is less or greater than the second one. **(2+4=6)**

(b) What is pointer? What are the key features of pointers? Write a flowchart for finding the smallest of three numbers. **(1+3+2=6)**

4. (a) Explain with examples the difference between: **(3X3=9)**
   i) Typedef and enumerated data type
   ii) automatic and static variables
   iii) fputc() and fscanf()

   (b) What are the functions of typecast operator and size of operator? **(3)**

5. (a) Explain and differentiate call by value and call by reference with an examples. **(6)**

   (b) Write a C program to draw a line, rectangle, circle, ellipse by using graph. **(6)**

6. (a) Write a program to search for an item in N number of elements using linear search. **(3)**

   (b) What are the various data types used in C? Explain. **(5)**

   (c) Define C language and its evolution and structure of C. **(4)**

7. (a) What is dynamic Memory Allocation? Explain the different types of DMA. **(6)**

(b) Given a file which contains some integers. From this file create another two files one for odd and second for even numbers. Print the result of both files. **(6)**

8. (a) What are the loop control structure used in C language? Explain the difference between while loop and do-while loop with suitable examples. **(6)**

(b) What is a file mode? Describe the various file mode options available with example. **(6)**

************I/MCA/102 ************