

Time: 3 Hours

**DECEMBER 2012**

Max. Marks: 100

**PLEASE WRITE YOUR ROLL NO. AT THE SPACE PROVIDED ON EACH PAGE IMMEDIATELY AFTER RECEIVING THE QUESTION PAPER.**

**NOTE: There are 9 Questions in all.**

- Question 1 is compulsory and carries 20 marks. Answer to Q. 1 must be written in the space provided for it in the answer book supplied and nowhere else.
- The answer sheet for the Q.1 will be collected by the invigilator after 45 minutes of the commencement of the examination.
- Out of the remaining EIGHT Questions answer any FIVE Questions, selecting TWO questions from part A and THREE questions from part B. Each question carries 16 marks.
- Any required data not explicitly given, may be suitably assumed and stated.

**Q.1 Choose the correct or the best alternative in the following: (2×10)**

a. The list of instructions in a computer language is called

- |                      |                      |
|----------------------|----------------------|
| (A) Computer program | (B) Algorithm        |
| (C) Flowchart        | (D) Utility programs |

b. FTP stands for

- |                            |                           |
|----------------------------|---------------------------|
| (A) File Transfer Protocol | (B) File Transport Packet |
| (C) File Transfer Packet   | (D) None of these         |

c. \_\_\_\_\_ is a multiuser operating system

- |             |                   |
|-------------|-------------------|
| (A) DOS     | (B) UNIX          |
| (C) WINDOWS | (D) NONE OF THESE |

d. The keyword used to transfer control from a function back to the calling function is

- |            |            |
|------------|------------|
| (A) switch | (B) return |
| (C) goto   | (D) break  |

e. From which of the libraries below, calloc( ) belongs to ?

- |              |                    |
|--------------|--------------------|
| (A) stdlib.h | (B) malloc.h       |
| (C) calloc.h | (D) both (A) & (B) |

f. What is the output of

```
#include<stdio.h>
main()
{
int x,y = 10;
```



- d. Describe the parity bit method of error detection. (4)
- Q.3** a. Define operating system. What are the major facilities provided by operating system? (6)
- b. Differentiate between Compiler and Interpreter. (4)
- c. Briefly explain the following:  
 (i) OMR (ii) VDU (6)
- Q.4** a. What is Internet? List various applications where Internet plays a major role. (4)
- b. Define and explain Computer Network. What is the need of computer network? Explain. (6)
- c. Differentiate between Data Bus, Address Bus and Control Bus. (6)

**PART B**

**Answer any THREE questions. Each question carries 16 marks.**

- Q.5** a. Write a 'C' program which reads a list of ten numbers and prints the average value of numbers entered. (6)
- b. Write short notes on  
 (i) Conditional Operators  
 (ii) Operators Precedence (8)
- c. What is the output of the following code segment? (2)
- ```

void main()
{
    int k,x=2;
    do
    {
        k=50;
        printf("%d %d", x, k);
        x--;
        k--;
    }while(x);
}

```
- Q.6** a. Differentiate between while and do while loop. (6)
- b. Explain the use of goto statement with the help of an example. Why is its use discouraged? (6)
- c. Explain the use of switch statement. Give syntax. (4)

**Code: DE53/DC53      Subject: COMPUTER FUNDAMENTALS & C PROG.**

- Q.7** a. How one-dimensional arrays are declared and initialized? Explain by giving suitable example. (6)
- b. Define String. Explain any three string handling functions used in C Language. (6)
- c. Give two ways of reading a line of text (a string having whitespace characters) in C. (4)
- Q.8** a. Write a function in 'C' that generates the first n terms of Fibonacci sequence. The sequence is given below:  
**0,1,1,2,3,5,8,.....**  
The value of n is passed as an argument to the function. (4)
- b. What are the advantages of using functions in 'C' language? Explain the concept of parameter passing. Give examples. (6)
- c. Write a function in C to sort an array of integers passed to it as an argument. (6)
- Q.9** a. Write a program that dynamically allocates an array of integers. A list of integers is read from the keyboard and stored in the array. The program should determine the smallest element in the list and prints its location in the list. (6)
- b. Explain the concept of file. List various file opening modes. (6)
- c. What is a pointer? List various advantages of using pointers. (4)