

Time: 3 Hours

DECEMBER 2013

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 brain of computer system is
- | | |
|---------------|------------|
| (A) ALU | (B) Memory |
| (C) Registers | (D) CPU |
- b. The tracks on a disk which can be accessed without repositioning the R/W heads is
- | | |
|-------------|--------------|
| (A) Surface | (B) Cylinder |
| (C) Cluster | (D) Frames |
- c. Which of the following is the 1's complement of 10?
- | | |
|---------|---------|
| (A) 01 | (B) 110 |
| (C) 111 | (D) 10 |
- d. A computer program that converts assembly language to machine language is
- | | |
|---------------|-----------------|
| (A) Compiler | (B) Interpreter |
| (C) Assembler | (D) Linker |
- e. Which access method is used for obtaining a record from a cassette tape?
- | | |
|------------|----------------|
| (A) Direct | (B) Sequential |
| (C) Random | (D) Indexing |
- f. What will be output if you will compile and execute the following c code?
- ```
main()
{
int c = --2;
printf("c%d",c);
}
```
- |       |        |
|-------|--------|
| (A) 2 | (B) -2 |
| (C) 0 | (D) 1  |

**Code: DE53/DC53**

**Subject: COMPUTER FUNDAMENTALS &**

89. Which bitwise operator is suitable for turning off a particular bit in a number?

**(A) && operator**

**(B) & operator**

(C) || operator

**(D)** ! operator

### h. What is the similarity between a structure, union and enumeration?

**(A)** All of them let you define new values

**(B)** All of them let you define new data types

(C) All of them let you define new pointers

**(D)** All of them let you define new structures

i. What does the following declaration mean?

```
int (*ptr)[10]
```

(A) *ptr* is array of pointers to 10 integers

(B) *ptr* is a pointer to an array of 10 integers

(C) *ptr* is an array of 10 integers

(D) *ptr* is an pointer to array

j. In C, if you pass an array as an argument to a function, what actually gets passed?

**(A)** Value of elements in array

**(B)** First element of the array

(C) Base address of the array

**(D)** Address of the last element of array

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

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- Q.2** a. Find the hexadecimal equivalent of:

(i)  $(0.5625)_{10}$

(ii)  $(0.3)_{10}$ 

**(2+2)**

b. Give the difference between micro, mini and mainframe & super computers(6)

c. Draw a block diagram to illustrate the basic organization of computer system and

explain the function of various units. (6)

**Q.3** a. Discuss various types of high level languages. **(6)**

b. Define the various types of common services provided by the operating

system. (6)

c. How Multitasking is different from multiprogramming? (4)

**Q.4** a. How LAN, WAN and MAN are differ from each other? **(8)**

b. What is the difference between internet and World Wide Web (WWW)? (8)

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

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- Q.5** a. What is keyword and identifier? Give the rules for identifier. (6)
- b. Write about various data types of C. (6)
- c. What are the rules for + + and - - operators? Discuss briefly. (4)
- Q.6** a. Describe nesting of IF.... ELSE statements with the help of example. (6)
- b. Describe the switch statement with the help of an example. (6)
- c. Give the difference between do-while and while loop. (4)
- Q.7** a. Write a Program to reverse ANY given number in C. (6)
- b. Do array subscripts always start with zero? (4)
- c. How to compare two strings without using strcmp? (6)
- Q.8** a. What is the need for user-defined functions? (4)
- b. Write down the advantages for using user-defined functions in 'C' language. (4)
- c. Write a C program to add two integers. Make a function add to add integers and display sum in main() function. (8)
- Q.9** a. What is pointer and how to use pointers in C? Also discuss about null pointers. (8)
- b. Discuss the following functions:-
- |             |              |
|-------------|--------------|
| (i) getc    | (ii) fscanf  |
| (iii) put w | (iv) fprintf |
- (4×2)