Code: DE53/DC53   Subject: COMPUTER FUNDAMENTALS & C PROGRAMMING

DiplETE – ET/CS

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. What format is used to print an integer with the printf function?

   (A) %y   **(B)** %z
   (C) %d   **(D)** % 1C

b. If count =9, the value of group = (++count) + 5 is

   (A) 10   **(B)** 12
   (C) 11   **(D)** 15

c. Decimal to Binary conversion of 15 is

   (A) 1010   **(B)** 1011
   (C) 1111   **(D)** 1001

d. Mathematical functions are available in which header file in C

   (A) stdio.h   **(B)** stdlib.h
   (C) math.h   **(D)** io.h

e. Which statement is not valid?

   (A) a pointer variable can be assigned the address of another variable
   (B) a pointer variable can be assigned the value of another pointer variable
   (C) a pointer variable can be initialized with null or zero value
   (D) none of the above

f. Indentify the correct declaration

   (A) int COUNT[5] [4];   **(B)** int SUM[10,10];
   (C) int GROUP(10) (10);   **(D)** int Z(10,10);

g. AN INTERPRETER is _____

(**A**) a combination of computer hardware
(**B**) a program which translates from one high-level language to another
(**C**) a program which translates from one high-level to a machine level line by line
(**D**) None of these

h. The parameters in a function call are

(**A**) Actual parameters   (**B**) formal parameters
(**C**) dummy parameters   (**D**) optional

i. OCR stands for

(**A**) Open Character Reader   (**B**) Optical Character Recognition
(**C**) Output Computer Reader   (**D**) None of these

j. FTP means

(**A**) File Transfer Packet   (**B**) File Transfer Protocol
(**C**) Frequently Transmitted Packet (**D**) None of these

PART A
Answer any TWO questions. Each question carries 16 marks.

Q.2 a. Explain the working of computer with stored program.   **(8)**

   b. Describe the hexadecimal representation of numbers.   **(8)**

Q.3 a. Discuss computer input units.   **(4)**

   b. Discuss the compiling of high level language program.   **(6)**

   c. Write a note on the layer of UNIX operating system.   **(6)**

Q.4 a. Define minimum microcomputer configuration in brief.   **(8)**

   b. What is the need of computer communication network?   **(8)**

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

Q.5   Discuss:
   (i)   Keyword and identifiers
   (ii) Bitwise operators
   (iii) Formatted input
   (iv) Formatted output.   **(4×4)**

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Q.6 a. Describe the else if ladder with example.   **(8)**

   b. Explain *Do-While* statement with examples.   **(8)**

Q.7 a. Discuss the initialization of two 'dimensional arrays'.   **(8)**

   b. How can you write the string to the screen?   **(8)**

Q.8   Discuss:
       (i) No argument but no return value with example.
       (ii) Function that return multiple values.   **(8+8)**

Q.9 a. Discuss declaration of pointer variable with example.   **(8)**

   b. Describe the following:
      (i)   getc and putc functions
      (ii) fprintf and fscanf functions

                                                       (4+4)