(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 1115   Roll No. ☐☐☐☐☐☐☐☐☐☐

B.Tech.

(SEM. I) ODD SEMESTER THEORY
EXAMINATION 2013-14

COMPUTER PROGRAMMING

Time : 3 Hours   *Total Marks : 100*

Note :– (i)   There are **three** Sections. Section A carries **20** marks, Section B carries **30** marks and Section C carries **50** marks.

(ii)   Attempt all questions. Marks are indicated against each question.

(iii)   Assume suitable data, wherever necessary.

SECTION–A

1. Attempt **all** parts :   (2×10=20)

(a) Write in brief about the components of Central Processing Unit of a Computer.

(b) Make the hierarchy of different memories available in a computer.

(c) Write the difference between while and do while loop.

(d) Write output of the following :

    printf("%d", strcmp("QUIET', "QUILT"));

(e) Declare and initialize three dimensional array.

(f) What do you mean by Operator Precedence ?

(g) Define double pointer with example.

(h) Write difference between implict and explicit type casting.

(i) Define operating system with its different functions.

(j) Write difference between complier and interpreter.

SECTION–B

2. Attempt any **three** parts :   **(10×3=30)**

(a) Convert the following :

    (i) $(FA1.2C)_{16} = (?)_8$

    (ii) $(756)_{10} = (?)_4$

    (iii) $(11011.011)_2 = (?)_{16}$

    (iv) $(574.32)_8 = (?)_2$

(b) Write difference between structure and array. Write a program in 'C' to find the largest element of a 3×3 matrix.

(c) What are the different types of functions ? Write a program in C to sort list of names of students in an ascending order.

(d) Define Union. Write a program in C to find the record of a student having maximum marks from the list of 10 records. Each record has roll no, name, class and marks fields.

CS101/DNG-52489   2

(e) Describe various storage classes supported in C, with suitable example.

SECTION–C

3. Attempt any **two** parts : (5×2=10)

   (a) Define algorithm and make a flow chart to find prime numbers between 101 and 999.

   (b) Write a short note on top-down program development approach.

   (c) Write a program in 'C' to print the following pattern :

   1

   2   3

   4   5   6

   7   8   9   10

4. Attempt any **two** parts : (5×2=10)

   (a) Write a program in C to copy content from one file to another file.

   (b) Write a program in C to reverse a string through pointer.

   (c) Define recursive function. Write a program in C to generate Fibonacci series (0 1 1 2 3 5 8 1 3 ...) using recursive function.

5. Attempt any **two** parts : (5×2=10)

   (a) What is the architecture of Linux Operating System ? Discuss.

   (b) Write a program in C to find the sum of individual digits in a five digit number.

   (c) Explain the following :

      (i) Preprocessor

      (ii) Conditional operators.

6. Attempt any **two** parts : (5×2=10)

   (a) Write difference between call by value and call by reference with suitable example.

   (b) Write a program in 'C' to find greatest no. among three numbers using conditional operator.

   (c) Write a short note on macros with suitable example.

7. Attempt any **two** parts : (5×2=10)

   (a) Differentiate between nested if and switch statements in 'C' with example.

   (b) Write a program in 'C' to sort list of 10 integers in an ascending order.

   (c) Write a program in 'C' to multiply the two matrices of M×N.