Code: 15A05101

R15

B.Tech I Year I Semester (R15) Regular Examinations December/January 2015/2016
COMPUTER PROGRAMMING
(Common to CE, EEE, CSE, ECE, ME, EIE and IT)

Time: 3 hours

Max. Marks: 70

PART – A
(Compulsory Question)
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1   Answer the following: (10 X 02 = 20 Marks)
  (a) Find and remove the error in the following C statement.
       a >b ? g = a : g = b;
  (b) Define algorithm.
  (c) What is the use of continue key word?
  (d) Consider the following declaration of 2D-array in C:
       char a[R][C];
       Assume that char type require one bytes of memory and that array is stored starting from memory
       address 2015, find the address of a[i][j].
  (e) Write the syntax of dynamic allocation functions in C language.
  (f) Give syntax to create a pointer to function.
  (g) What is the role of stack in recursion?
  (h) Why to use typedef?
  (i) Define a file.
  (j) What is the use of the preprocessor directives?

PART – B
(Answer all five units, 5 X 10 = 50 Marks)

UNIT – I

2   (a) List and explain the various symbols used in flowchart with figures.
    (b) Write a C Program to find maximum number among three numbers using conditional operator.
OR
3   (a) Write an algorithm to find product of two integers using repetitive addition.
    (b) Evaluate the following expressions:
         (i) 4-768/(6*^2).
         (ii) 8^2*2-100+50/5(25-5).

UNIT – II

4   (a) There are four coins a, b, c, d out of which three coins are of equal weight and one coin is
         heavier. Write a C program to find the heavier coin.
    (b) Explain the ways in which we can pass a one dimension array to functions.
OR
5   (a) Give a note on iteration statements in C language.
    (b) A program P reads in 500 integers in the range (0,100) representing the scores of 500 students. It
         then prints the frequency of each score above 50. Implement program P in C language.

UNIT – III

6   Give a detailed note on pointer expressions.
OR
7   List and explain the storage classes with examples.

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UNIT – IV

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8 (a) Write a recursive function in C to find the sum of array elements.

    (b) Explain the following:

        (i) Structure with in structure.

        (ii) Self reference structure.

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OR

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9 (a) $f(n) = n/2$ when n is even; $f(n) = f(3n + 1)$ when n is odd. Write the recursive function to compute f(n).

    (b) How to pass the structures to functions as an argument? Explain with a suitable example.

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UNIT – V

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10   Describe the following file functions.

    (a) fopen().

    (b) fclose().

    (c) getc().

    (d) putc().

    (e) feof().

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OR

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11 (a) How to use fseek() for random access of the file content?

     (b) Explain about Macros with an example.

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