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

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.

OR

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.

UNIT – V

10   Describe the following file functions.
     (a)   fopen().
     (b)   fclose().
     (c)   getc().
     (d)   putc().
     (e)   feof().

OR

11   (a)   How to use fseek() for random access of the file content?
      (b)   Explain about Macros with an example.

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