Code No: R07A1EC01

**R07**

**I B.Tech Examinations,May/June 2012**
**C PROGRAMMING AND DATA STRUCTURES**
**Common to CE, CHEM, BME, IT, AE, BT, ICE, E.COMP.E, ETM,**
**E.CONT.E, EIE, CSE, ECE, CSSE, EEE**

**Time: 3 hours**                                                        **Max Marks: 80**

**Answer any FIVE Questions**
**All Questions carry equal marks**
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1. Explain the representation of a binary search tree using array.                [16]

2. (a) What is the difference between structures and Union?

   (b) Write a program to store three records in one structure.                [8+8]

3. (a) Explain briefly about the History of 'C' language.

   (b) What is the general structure of 'C' program and explain.                [8+8]

4. Write a program to implement complex numbers  subtraction and division using
   pointers and write the results to a data file.                                [16]

5. (a) What are the advantages of using pointers?

   (b) Write short notes on pointer to void.                                    [8+8]

6. Write a program to insert and delete elements in a sorted circular queue.     [16]

7. What is a function? What are the different types of functions? Explain function
   with no argument and no return type with an example.                          [16]

8. Which searching technique uses the sorted array as the input elements? Explain
   with example.                                                                 [16]

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