Code No: 07A1EC01 **Set No. 1**

I B.Tech Supplimentary Examinations, Aug/Sep 2008
C PROGRAMMING AND DATA STRUCTURES
(Common to Civil Engineering, Electrical & Electronic Engineering, Electronics & Communication Engineering, Computer Science & Engineering, Chemical Engineering, Electronics & Instrumentation Engineering, Bio-Medical Engineering, Information Technology, Electronics & Control Engineering, Computer Science & Systems Engineering, Electronics & Telematics, Electronics & Computer Engineering, Aeronautical Engineering, Instrumentation & Control Engineering and Bio-Technology)

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

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Write a 'C' program to find the squares of N numbers using do - while.
   (b) Write a 'C' program to convert Decimal Number to Octal Number. [8+8]
2. Write a program using function with argument and with return value to find sum of odd & even series. [16]
3. Define an array. What are the different types of arrays? Explain. [16]
4. Define Structure and write the general format for declaring and accessing members. [16]
5. Explain the following operations
   (a) fseek()
   (b) ftell
   (c) rewind()
   (d) ferror() [16]
6. What are the advantages of external sorting? Write a program to perform merge sort with following elements
   Set A { 11 , 16,22,25 } Set B { 15,19,2,23 } [16]
7. Define stack. What are the different methods used to implement stack, and explain different operations performed on it. [16]
8. (a) What are the differences between a tree and binary tree?
   (b) Give the representation of binary trees and explain. [8+8]

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Code No: 07A1EC01 **Set No. 2**

I B.Tech Supplimentary Examinations, Aug/Sep 2008
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Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Define Algorithm.
   (b) What is the use of flowchart?
   (c) What are the different steps followed in the program development? [3+3+10]
2. (a) Explain about call by value with an example.
   (b) Write a program to generate Fibonacci series using with argument and return type. [8+8]
3. Write the syntax for declaring two - dimensional array write a program to access and print the array elements. [16]
4. How to copy one structure to another structure of a same data type, give an example? [16]
5. (a) Write the syntax for opening a file with various modes and closing a file.
   (b) Explain about file handling functions. [8+8]
6. Write a program to sort the elements whose worst and average case are O(n log n). [16]
7. What is a singly linked list? Write a program to delete a node in front, rear and in a particular position and print the list. [16]
8. Write a 'C' program to implement recursive algorithm for a Binary Search Tree. [16]

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Code No: 07A1EC01 **Set No. 3**

I B.Tech Supplimentary Examinations, Aug/Sep 2008
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Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. How algorithm is different from flowchart? Write an algorithm and draw flowchart for finding greatest among three given numbers. [8+8]
2. What is a function? What are the different types of functions? Explain function with no argument and no return type with an example. [16]
3. Define an array. What are the different types of arrays? Explain. [16]
4. Compare arrays, structures and unions. [16]
5. (a) Write the syntax for opening a file with various modes and closing a file.
   (b) Explain about file handling functions. [8+8]
6. What is the advantage of binary search? Write a program to search an element 30 in the given set of inputs { 12,15,18,30 } [16]
7. (a) Compare the advantages and disadvantages of doubly linked list over singly linked list.
   (b) Implement a queue using linked list and write a 'C' routine to add elements from a queue. [8+8]
8. Explain about connected and non-connected graph and list the difference between them? [16]

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Code No: 07A1EC01 **Set No. 4**

I B.Tech Supplimentary Examinations, Aug/Sep 2008
C PROGRAMMING AND DATA STRUCTURES
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Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Write a 'C' program to convert Decimal to Hexa Decimal number.
   (b) Write a 'C' program to find area of circle. [10+6]
2. What are the different standard library functions available in 'C'? Explain with a sample program. [16]
3. (a) Write a program to perform addition of two matrices.
   (b) Write the program to find the sum of even numbers using arrays. [10+6]
4. (a) How is structure different from an array? Explain.
   (b) How an array be included as a member of a structure? [8+8]
5. (a) Write the syntax for opening a file with various modes and closing a file.
   (b) Explain about file handling functions. [8+8]
6. Explain the sorting mechanism which uses the concept of pivot element selection with a program. [16]
7. Write an 'C' program to implement linked stacks. [16]
8. (a) What is a network?
   (b) What is a spanning tree?
   (c) Define minimal spanning tree.
   (d) What are the various traversals in a tree? [16]

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