

2ND SEMESTER EXAMINATION – 2006

DATA STRUCTURE USING 'C'

Full Marks – 70

Time : 3 Hours

*The figures in the right hand margin indicate full marks for the questions.*

*Answer questions No. 1 which is compulsory and any five from the rest.*

1. Answer the following : 2×10

(a) Write the output of the following C program :

Main ()

{int I =32, j= 0X 20 ;

int k, l, m ;

k = i/j ;

I = i & j ;

m = k^ ;

printf ("in %d %d %d %d %d", i, j, k, l, m);

}

P.T.O.

- (b) Define Priority queues.
- (c) What is enumeration ? Explain.
- (d) What is stack and how it can be represented using arrays ?
- (e) What are register variables and where are they used ?
- (f) What is a macro definition ?
- (g) Define the term "Right in threaded binary tree".
- (h) Highlight the application of tree.
- (i) Mention in which situation binary tree is superior to interpolation search.
- (j) Obtain prefix and postfix expression.  
(A + B ^ C ^ D) \* (E + F/D)
2. Explain merging of two lists which have been represented as (i) Array and (ii) Link list 10
3. Write a C function to insert and delete a node from the front end in case of double linked list. 10

4. Explain the different methods of Binary tree representation. 10
5. Write a program in C to copy the contents of one file to another. 10
6. What is recursion ? Explain with an example. 10
7. Write a C procedure to sort the records by using insertion sort. 10
8. Show the steps to sort the following elements in ascending order address calculation. 10
- 19 13 05 27 01 26 31 16 02 09 11 21