

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.

$(A + B \wedge C \wedge D) * (E + F/D)$

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

  
POWER OF KNOWLEDGE