

**SECOND SEMESTER EXAMINATION 2006
DATASTRUCTURE USING 'C'**

Question 1

(a)

Write the output of the following C program:

Main ()

```
{
int I=32,j=0X 20;
int K,l,m;
k=i/j;
l=i&j;
m=k^;
printf("in %d%d%d%d%d", i,j,k,l,m);
}
```

(b)

Define Priority Queues.

(c)

What is enumeration? Explain/

(d)

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 .

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

Question 2

Explain merging of two lists which have been represented as (i) Array (ii) Link list(10)

Question 3

Write a C function to insert and delete a node from the front end in in case of double linked list.(10)

Question 4

Explain the different methods of Binary tree representation.(10)

Question 5

Write a program in C to copy the contents of one file to another.

Question 6

What is recursion? Explain with an example.(10)

Question 7

Write a C procedure to sort the records by using insertion sort.(10)

Question 8

Show the steps to sort the following elements in ascending order address calculation .
19 13 05 27 01 26 31 16 02 09 11 21

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