



BX-0785

Seat No. C

Second Year B. C. A. (Sem. III) Examination

April / May – 2006

Data Structure & Advance 'C' : Paper - 303

Time : Hours]

[Total Marks : 100

Instructions :

(1)

नीचे दशांशवैक्य निशानावाणी विगतो उत्तरवली पर अवश्य लभवी.
Fillup strictly the details of signs on your answer book.

Name of the Examination :
S.Y. B.C.A. (Sem. III)

Name of the Subject :
Data Structure & Advance 'C' : Paper - 303

Subject Code No. : 0 7 8 5 Section No. (1, 2,.....) : Nil

Seat No. :
C C C C 1 3 C

Student's Signature
S. J. J.

(1) Q. 1 is compulsory.

1. Answer in short :

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- Discuss disadvantages of stack and queue compare to linked list.
- Give the structure for the following linked lists.
 - Linked list of student's name.
 - Linked list of linked list.
- Why circular link list is more efficient than singly link list?
- Define: Leaf node and siblings with example.
- What is condition of overflow in circular queue?
- Translate the expression into infix notation and then evaluate it $5, 3, + 2, *, 6, 9, 7, -, /, -$.
- Explain complete binary tree with example
- What do you mean by polish and reverse polish notation? Give one example.
- Explain self referential structure with proper example
- What is storage poll?

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2 (a) How stack is used in recursive procedure? To generate Fibonacci series which procedure is best? Recursive or Non-recursive? Justify your answer. ✓ 7

✓ (b) What is DEQUE? Write an algorithm to perform insertion operation in output-restricted DEQUE. ✓ 8
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OR

1 (a) Declare pointer to a integer and use it instead of one dimensional array and perform sorting on it. 7

✓ (b) Write an algorithm to reverse string using stack. 8
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3 (a) Write a recursive C function for Quick-Sort and also process following array : 7
3,1,4,5,10,7,8
2/18

(b) Write an algorithm for evaluation of prefix expression. ✓ 8

OR

Fr (a) Write an algorithm for sorting the singly link list. 7

(b) Construct threaded binary tree for the following. 8

K, S, D, G, T, E, M, H, P, A, F, U.

(i) Find the in order traversal.

(ii) Delete node E from constructed threaded binary tree.

4 (a) Which sorting technique is best among radix, merge, quick and insertion sort? Justify your answer. ✓ 7
402
375 357

OR

(a) Discuss about Binary search tree. Explain all possible operation on it. 7

(b) Write a short note on user defined function. List out the categories of UDF. UDF can return more than one value-comment on this statement. ✓ 8
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OR

(b) Discuss the advantages and disadvantages of pointers. 8
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5 (a) Write a program to insert at least 10 records in file "stud" which contain fields rollno, name, marks. And thereafter display all records on proper format. 5
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(b) Write short notes : (any two)

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(i) Compare Sequential and Random file access

(ii) Insertion sort

(iii) Difference between static allocation and dynamic allocation.

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