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BA-1863

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

September / October – 2009

303 - Advance 'C' & Data Structure

Time : 3 Hours]

[Total Marks : 70

Instructions :

(1)

नीचे दशांशविक निशान्तीवाणी विगतो उत्तरवडी पर अवश्य दपवी.
Fillup strictly the details of signs on your answer book.

Name of the Examination :
S. Y. B. C. A. (Sem. 3)

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

Subject Code No. : 1 8 6 3 Section No. (1, 2,.....) : Nil

Seat No. : 0 9 0 5 7 9

Student's Signature

(2) Attempt all questions.

(3) Figures to the right indicate marks of that question.

1 Answer in short :

10

(1) Why we need to assign prototype to function ?

(2) What is self referential structure ? Explain with example.

(3) What is the purpose of rewind () ?

(4) Which condition is not necessary in dynamic stack ?

(5) List out the computer application of queue.

(6) List out advantages of linked list.

(7) Explain how to define and initialize a pointer.

(8) What is the purpose of command line argument ?

(9) Define Data Structure. What is the advantage of data structure ?

(10) Convert the following to infix expression
abcd + /-

- 2 (a) Write a recursive function that generate first N Fibonacci numbers. 7
- (b) Explain circular queue with its advantages. 8
- ✓ Write an algorithm to insert and delete in circular queue.

OR

- 2 (a) Explain recursion. Give advantages and disadvantages of it. Write a recursive function to find factorial of a number. 7
- (b) Write a program to find largest element from $m \times n$ matrix. The function should return the search element. 8
- 3 (a) Explain D-Queue with example. Write an algorithm to insert and delete in input restricted D-Queue. 7
- ✓ (b) Write a menu driven program to create a link list of student which contains information part as (Roll No, Name, Marks), perform the following operation : 8
- (1) Insert a new node (Rollno wise)
- (2) Display
- (3) Search.

OR

- (b) Write a program to convert infix expression to prefix and postfix expression. 8
- 4 (a) What is difference between built in function and user define function ? Explain elements of function as well as category of user defined function. 7
- ✓ (b) Write a program to receive two file names as a command line argument and copy the data of first file into another file. 8

OR

- 4 (a) What is the difference between static memory allocation and dynamic memory allocation ? Write an algorithm to search an element using linear search. 7
- (b) Write a program that requests for a file name and an integer, known as offset value. The program then reads the file from starting to specified offset value and display on screen. 8
- 5 Write short notes : (any two) 15
- (1) Quick sort
 - (2) I/O functions of file
 - (3) Compare and contrast structure and union
 - (4) Tower of hanoi
 - (5) Pointers.