



SB-4312
MCA (Sem. II) Examination
March / April – 2011
Paper-202 : Data Structures

Time : 3 Hours]

[Total Marks : 70

Instructions :

(1)

<p>नीचे दशांश देव निशान्नीवाणी विगतो उत्तरवडी पर अवश्य लपवी. Fillup strictly the details of signs on your answer book.</p> <p>Name of the Examination : MCA (Sem. 2)</p> <p>Name of the Subject : P-202 : Data Structures</p> <p>Subject Code No. : 4 3 1 2 Section No. (1, 2,.....): Nil</p>	<p>Seat No. : <input type="text"/><input type="text"/><input type="text"/><input type="text"/><input type="text"/><input type="text"/></p> <div style="border: 1px solid black; border-radius: 15px; height: 80px; display: flex; align-items: center; justify-content: center; margin-top: 10px;">Student's Signature</div>
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- 1 Do as directed : 14
 - (a) Write an algorithm for conversion of infix expression to postfix notation. 5
 - (b) What is data structure ? Give their classification. 5
Explain the different operations which are performed on data structure.
 - (c) Write a note on circular linked list with their storage representation. 4

- 2 Do as directed : 14
 - (a) Explain the following terms (any three) 6
 - (i) Tree
 - (ii) In degree
 - (iii) Loop
 - (iv) Graph
 - (b) Write function to perform following operations on a stack of integers : 6
 - (i) Delete an element
 - (ii) Insert an element
 - (c) Define queue. 2

3	Do as directed :	14
	(a) Write down and algorithm for selection sort.	5
	OR	
	(a) What do you mean by FIFO structure ? Explain the data structure that works on this principle taking suitable example.	5
	(b) Write a note on Priority Queues.	5
	(c) What is a tree ? Explain storage representation for a binary tree.	4
4	Do as directed :	14
	(a) Describe the general method of divide and conquer. Show how quick sort applies divide and conquer strategy taking suitable example.	6
	(b) Explain Hashing and Hashing Functions.	5
	OR	
	(b) Define : Hash collision. Explain how to resolve it in two different ways.	5
	(c) Explain what to do you mean by Lexically Ordered Binary Tree.	3
5	Do as directed :	14
	(a) Write notes on (any two) :	10
	(i) Backtracking	
	(ii) 2-3 Tree	
	(iii) Dequeue	
	(b) What is external sorting ? Explain any one technique of it.	4