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SB-0712

Second Year B. Sc. Examination

March / April – 2011

**Computer Science : Paper - III
(Data Structure Using C++)**

Time : Hours]

[Total Marks : 70

Instructions :

(1)

नीचे दर्शाविले निशानीवाणी विगतो उत्तरवडी पर अवश्य लपवी. Fillup strictly the details of signs on your answer book.	Seat No. :
Name of the Examination :	<input type="text"/>
<input type="text" value="S. Y. B. Sc."/>	<input type="text"/>
Name of the Subject :	<input type="text"/>
<input type="text" value="Computer Science : Paper - 3"/>	<input type="text"/>
Subject Code No. : <input type="text" value="0"/> <input type="text" value="7"/> <input type="text" value="1"/> <input type="text" value="2"/>	<input type="text" value="Student's Signature"/>
Section No. (1, 2,.....) : <input type="text" value="Nil"/>	

- (2) All questions carry **equal** marks.
(3) Figures in the **right** indicate full marks.

- 1 Answer in brief : 14
- What is formal parameter and actual parameter ?
 - Write use of >> and << operator.
 - What is inline function ?
 - Define stack.
 - Define the term encapsulation.
 - Define function overloading.
 - Define path and leaf.

- 2 (a) Explain the concept of OOP and give benefits of OOP. 14
(b) Which types of constructors are used in C++ ?
Discuss with example.

OR

- 2 (a) Write note on templates. 14
(b) Discuss the priority queue with example.
- 3 (a) What do you mean by exception ? How will you use exception ? Give proper example of it. 14
(b) Write a program to overload unary operator ++, --.

OR

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[Contd...

- 3 (a) Define friend function. Write a program which will use friend function. 14
(b) Write a program to overload new and delete operator.
- 4 (a) Write an algorithm to arrange elements of an array using insertion sort. 14
(b) Write an algorithm to search an item from list using linear search.

OR

- 4 (a) Define the file. What are the differences between opening a file with open () and constructor function. 14
(b) Explain how data file can be opened and closed in C++ with example ?
- 5 Attempt any **two** : 14
(a) Write an algorithm to convert postfix expression into infix expression.
(b) Explain binary tree. Discuss all possible operation on it.
(c) Write a program to create a stack linked list and display the stack list.
(d) Write a program to perform insert and display operations in doubly link list.