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SARDAR PATEL UNIVERSITY
M.Sc.(Information Technology)
SEMESTER-I
External Examination (NC) - 2016
PS01CINT02- (Advanced Programming Concepts and Data Structures)
5th April ,2016

Time:10:30am to 1.30pm **Marks:70**

Q1 Give answers of following Multiple choice questions [8]

1 Identify the operator that is NOT used with pointers.

A -> B &
C * D >>

2 _____ has ability to take more than one forms.

A Object B Class
C Inheritance D Polymorphism

3 The memory address of the first element of an array is called_____

A Floor address B First address
C Foundation address D Base address

4 A node having Zero indegree is known as _____ node.

A Root B Leaf
C Branch D Terminal

5 _____ is function called automatically when the object of that class is created.

A Inline B Void
C Friend D Constructor

6 How many constructors can a class have?

A 0 B 1
C 2 D Any Number

7 Which of the following data structure is related to LIFO?

A Stack B Array
C Queue D Tree

8 In Array Data Structure, _____ denotes the size of an element.

A WORD B SIZE
C BASE D LENGTH

Q2 Do as directed (Any 7) [14]

1 Differentiate: Static binding and Dynamic binding.
2 List out various modes of file management with their meaning.
3 What is difference between constructor and destructor?
4 What is class? Describe syntax for define member function inside and outside class.
5 Write a note on macros in C++.
6 Define A) Field B) Record
7 What is Data Structure? Write any four application of Data Structure.
8 Discuss on parameter passing using pass by value and pass by reference.
9 Write down steps for preorder, inorder and postorder traversal of binary tree.

Q3 [A]	Explain characteristics of OOP's (Object Oriented Programming). Explain the basic terminology related to OOP's. List advantages and disadvantages of OOP's.	[6]
Q3 [B]	What do you mean by Command line argument? Explain with an example.	[6]
	OR	
Q3 [B]	Explain function overloading with example.	[6]
Q4 [A]	Define inheritance & explain its different forms using example. Explain advantages and disadvantages of inheritance.	[6]
Q4 [B]	Explain with example default arguments and inline function.	[6]
	OR	
Q4 [B]	What is operator overloading? Explain Binary operator with example.	[6]
Q5 [A]	What is Linked List? Write an algorithm for insertion of element at the last of the singly Linked List.	[6]
Q5 [B]	What is Stack? Explain PUSH and POP algorithms	[6]
	OR	
Q5 [B]	Write an algorithm for deletion operation of Simple Queue.	[6]
Q6 [A]	What is file? Differentiate between sequential file organization and random file organization.	[6]
Q6 [B]	What is hashing? List out Hashing techniques. Explain ANY TWO of them.	[6]
	OR	
Q6 [B]	Write a brief note on ISAM.	[6]

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