

[48]

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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