

[91]

SEAT No. _____

No. of Printed Pages : 2

Sc

SARDAR PATEL UNIVERSITY
M.Sc. Information Technology (Semester-1)
External Examination (NC)
Subject Code : PS01CINT02
Advanced Programming Concepts & Data Structures

Date: 25/10/2018, Thursday

Total Marks: 70

Time : 10:00 to 01:00 PM

Q.1 Multiple Choice Questions.

[08]

- 1 _____ operator is the same as "scanf()" function used in C.
A. cin
B. cout
C. printf
D. out.println()
- 2 _____ is the developer of C++
A. Dennis Richie
B. Ivan Bayros
C. Bjarne Stroustrup
D. Andy Rubin
- 3 By default, the members of class are
A. Private
B. Public
C. Protected
D. Friend
- 4 _____ is/are the types of the constructor.
A. Default
B. Parameterized
C. Copy
D. All of the above
- 5 The correct function name for overloading the addition(+) operator is
A. Operator(+)
B. Operator+
C. +Operator
D. (+)Operator
- 6 A pure virtual function is equal to _____
A. 0
B. 2
C. 1
D. 3
- 7 Which of the following data structures is related to LIFO?
A. Stack
B. Queue
C. Tree
D. Array
- 8 _____ traversal algorithm process root last.
A. Preorder
B. Postorder
C. Inorder
D. None of these.

Q.2 Answer the following Short Questions. (Attempt any seven) [14]

- 1 Define Encapsulation as concept of OOP.
- 2 What is C++? Explain structure of C++.
- 3 Define Pointer. Why it is required?
- 4 List out various modes of file management with their meaning.

(1)

(PTO)

- 5 Explain Function Overloading.
- 6 What is Copy Constructor?
- 7 Write down steps for preorder, inorder and postorder traversal of binary tree.
- 8 Define. A. Field B. Record
- 9 What is a Linked List? List the types of Linked List.

Q.3 Do as Directed. [12]

[A] Differentiate OOP & POP. [06]

[B] Explain different operator available in C++. [06]

OR

[B] Explain Friend Function with its syntax & example. Write down the characteristics of Friend Function. [06]

Q.4 Do as Directed. [12]

[A] Write a note on Inline Function with suitable example. [06]

[B] What is an Inheritance and types of Inheritance and explain any one with suitable example. [06]

OR

[B] What is Operator Overloading? Explain Unary operator overloading with suitable example. [06]

Q.5 Do as Directed. [12]

[A] What is Stack? Explain two operations of them with their algorithm. [06]

[B] What is Queue? Write down algorithm for INSERT and DELETE an element operation on them. [06]

OR

[B] Write down algorithm for insert a node at front in Singly Linked List. [06]

Q.6 Do as Directed. [12]

[A] Write a note on Sequential File Organization. [06]

[B] Write a note on hashing function. [06]

OR

[B] Write a note on ISAM. [06]