

[81]

M.Sc.IT ( Sem- 1 NC)

PS01CINT22: Advanced Programming Concepts &amp; Data Structures

Date: 12-04-2018

Time : 2.00 pm – 5.00 pm

Marks: 70

Thursday

50

Q-1 Select the correct option.

8

- (1) \_\_\_\_\_ is the operator of C++ is the same as "scanf()" function used in C.  
A cin B cout  
C cprintf D None of these
- (2) \_\_\_\_\_ is a non-member function which can access private & protected members of some other class.  
A friend function B virtual function  
C operator function D pure virtual function
- (3) Creating a new class using one or more existing classes is known as \_\_\_\_\_.  
A Polymorphism B Encapsulation  
C Inheritance D Data Hiding
- (4) By default, main( ) in C++ returns \_\_\_\_\_.  
A void B int  
C char D float
- (5) Stack is \_\_\_\_\_ data structure.  
A Linear B Non linear  
C Both A & B D None of the these
- (6) In row major order, elements of matrix are stored on a \_\_\_\_\_ basis.  
A Row by Column B Column by Column  
C Column by Row D Row by Row
- (7) \_\_\_\_\_ of a node is the immediate predecessor of a node.  
A Leaf B Child  
C Parent D Grand Parent
- (8) A \_\_\_\_\_ is a collection of information items about a particular entity.  
A Record B Database  
C Entity D Field

[P.T.O.]

- Q-2 Do as directed. (ATTEMPT ANY SEVEN) 14
- (1) Define with an example: Data Member and Member function.
  - (2) List out names of operators that cannot be overloaded in C++.
  - (3) Difference between Constructor & Destructor
  - (4) Explain: cin and cout with example.
  - (5) What do you mean by row-major order and column major order?
  - (6) Describe the use of private access specifier.
  - (7) Differentiate between B tree and B+ tree.
  - (8) What is Data structure? List their application area.
  - (9) Define with an example: Field and Record.
- Q-3 A Explain Polymorphism with an example. 6
- B Write a note on Default Constructor. 6
- OR
- B Explain in brief: Friend Class. 6
- Q-4 A List out advantages of OOPs. 6
- B Write a note on new and delete operator used in C++. 6
- OR
- B Discuss inorder, preorder and postorder traversal of binary tree with an example. 6
- Q-5 A Write an algorithm for PUSH and POP operations STACK data structure. 6
- B What is an Inheritance? List out forms of Inheritance. Explain ANY ONE of them in detail. 6
- OR
- B What is an Operator Overloading? List out their types. Explain ANY ONE of them in detail. 6
- Q-6 A Explain ANY TWO Hashing functions with example. 6
- B Write a note on Inverted List. 6
- OR
- B Write a note on Multi List. 6

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