



PBI-003-001312

Seat No. _____

B. Sc. (Sem. III) (CBCS) Examination

November / December - 2018

CA - 301 : Data Structure & OOP With C++

(Old Course)

Faculty Code : 003

Subject Code : 001312

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

Instructions :

- (1) Answers for all must be written in your answer sheet.
- (2) Figures on the right indicate full marks.

1 Attempt all :

20

- (1) The name of constructor is same as name of _____.
- (2) Constructors are of _____ types.
- (3) If name of all functions are same, then its called _____.
- (4) There are _____ types of inheritance.
- (5) OOPS stands for _____.
- (6) C++ was developed by _____.
- (7) Function overloading is feature of _____ concept of OOP.
- (8) The members of class are _____ in default.
- (9) The static member variable is initialize to _____ when object is created of class.
- (10) The constructor can take parameters (True/False) ?
- (11) The virtual function should be declared in _____ class.
- (12) We can create object of abstract class. (True/False) ?
- (13) Which keyword is used to specify operator overloading function ?
- (14) Which type of inheritance one class derive from more than one base class ?
- (15) Constructor is called when _____ of class is created.
- (16) A class defined inside of class is called _____.
- (17) If user insert new value to stack, _____ operation perform.
- (18) Stack allocation is _____.
- (19) If the user delete value to stack _____ operation perform.
- (20) There are _____ types of link list.

- 2 (a) Define following concept with examples (any **three**) **6**
- (1) Class
 - (2) Array
 - (3) Constructor
 - (4) fopen ()
 - (5) fclose ()
 - (6) fprintf ()
- (b) Attempt following questions : (any **three**) **9**
- (1) Explain Friend function with example.
 - (2) Explain Base Class with example.
 - (3) Explain scope resolution operator.
 - (4) Explain operator overloading, with example.
 - (5) Differentiate Static Array v/s Dynamic Array.
 - (6) Explain User Defined function with example.
- (c) Attempt following questions : (any **two**) **10**
- (1) Explain stack with example.
 - (2) Explain Simple queue with example.
 - (3) Explain Single Link List.
 - (4) Explain Multilevel Inheritance with example.
 - (5) Explain Pointer.
- 3 (a) Define following concept with example : (any **three**) **6**
- (1) Destructor.
 - (2) Recursion.
 - (3) Inline function.
 - (4) Abstract Class.
 - (5) fgets ().
 - (6) Pure virtual function.
- (b) Attempt following questions : (any **three**) **9**
- (1) What is call by value and call by reference ?
Give appropriate example.
 - (2) Explain This pointer with example.
 - (3) Differentiate stack v/s queue.
 - (4) Differentiate overloading v/s. overriding.
 - (5) Explain new and delete in C++.
 - (6) Explain doubly link list with example.
- (c) Attempt following questions : (any **two**) **10**
- (1) Explain virtual base class.
 - (2) Explain multiple inheritance.
 - (3) Write a programme which overload operator + (plus)
 - (4) Write a programme to implement stack.
 - (5) Explain parameterized constructor.