

C 82134

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Name

Reg. No.....

SECOND SEMESTER **B.C.A.** DEGREE [SUPPLEMENTARY/IMPROVEMENT]
EXAMINATION, APRIL/MAY 2015

(~~UG—CCSS~~)

Core Course

CA 2B 02—PROGRAMMING IN C++ AND DATA STRUCTURES

Time : Three Hours

Maximum : 30 **Weightage**

I. Answer all *twelve* questions :

- 1 The data members in a class of a C++ program are by default _____
- 2 _____ operator is used to find the memory size of a variable in bytes.
- 3 _____ is an example of derived data type in C++.
- 4 _____ operator is used to dynamically allocate the memory in C++.
- 5 ~~The~~ constructor that accepts no parameters is called the _____ constructor.
- 6 An ~~exception~~ is thrown by using the _____ keyword from inside the try block.
- 7 _____ is a member function having the same name as that of the class.
- 8 _____ elements should be sorted before performing _____ search.
_____ is a FIFO structure.
- 10 ~~The~~ prefix form of $(A+B)*(C-D)$ is _____
- 11 ~~Lin. ed~~ list is a _____ data structure.
- 12 The number of nodes in a tree is called _____

(12 x ~~4~~ = 3 **weightage**)

II. Answer all *nine* questions :

- 13 Write a short note on enumeration.
- 14 Explain logical operators with example
- 15 Write short note on **inline** functions.
- 16 Explain the importance of new and delete operators in memory management.
- 17 Write a short note on nested class.
- 18 What is meant by virtual base class.
- 19 Write ~~ny~~ four applications of stack.
- 20 ~~Expla~~ the role of head node in linked list.
- 21 Write _____ procedure to delete a child of a binary tree.

(9 x 1 = 9 **weightage**)

Turn over

III. Answer any five questions :

- 22 Explain features of OOPS concept.
- 23 Compare call by reference and return by reference.
- 24 Define constructor ? List the characteristics of constructors.
- 25 What are virtual functions ? Explain the importance of virtual functions with the help of an example.
- 26 Explain multilevel inheritance with an example.
- 27 Write C++ program to implement stack operations.
- 28 Write a non recursive procedure to perform IN ORDER traversal of binary trees.

(5 x 2 = 10 weightage)

IV. Answer any two questions :

- 29 (a) What is operator overloading ? Write a program to compare two strings using overloaded == operator.
 - (b) What is polymorphism ? Explain different type of polymorphism.
- 30 (a) Explain exception handling mechanism supported by C++.
 - (b) Explain how templates support generic programming, write suitable example.
- 31 (a) Write the procedure for bubble sort.
 - (b) Explain the working of binary search algorithm.

(2 x 4 = 8 weightage)