

C 25915

(Pages : 2)

Name.....

Reg. No.....

**SECOND SEMESTER B.C.A. DEGREE (SUPPLEMENTARY) EXAMINATION
APRIL 2017**

(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 total number of nodes in the binary tree which has of level n is _____.
- 2 Name of data structure which can store finite number of homogeneous elements.
- 3 The postfix notation of $((A/B)-C)+(D * E)-(A * C)$ is _____.
- 4 Class is a _____ data type.
- 5 Symbol used for destructor is _____.
- 6 Calculation of hash function in division method is _____.
- 7 Name of a data structure in which elements are inserted and deleted in different ends are called.
- 8 Doubly linked list is a _____ data type ?
- 9 Name of an operator which is not used for operator overloading.
- 10 _____ is the name of the qualifier.
- 11 The operator $>>$ is called _____.
- 12 Name of a datatype which used for generic pointer.

(12 × ¼ = 3 weightage)

II. Answer all nine questions :

- 13 What is a circular queue ?
- 14 What is hashing ?
- 15 Define stack ?
- 16 What is the complete binary tree ?
- 17 List name of any *two* data structures.

Turn over

- 18 Write structure of linked list.
- 19 Define circular queue ?
- 20 What is data hiding ?
- 21 What is void data type.

(9 × 1 = 9 weightage)

III. Answer any *five* questions :

- 22 Define graph ? What are the applications of graph.
- 23 What are the different characteristics of C++.
- 24 Discuss about the implementation of priority queue.
- 25 Define sparse matrix ? Explain about how it can be represented.
- 26 Discuss about the queue operations ?
- 27 Differentiate single linked list and circular linked list.
- 28 Write a program to find factorial of a number using copy constructor

(5 × 2 = 10 weightage)

IV. Answer any *two* questions :

- 29 What is constructor overloading ? Write a program to implement interest calculation of an amount using constructor overloading.
- 30 Write algorithms related to insertion and deletion operations of linked list.
- 31 What is hash function ? What are different methods of choosing a hash function.

(2 × 4 = 8 weightage)