**QP CODE: 19102230** 

## **B.Sc. DEGREE (CBCS) EXAMINATION, OCTOBER 2019**

**Third Semester** 

## CORE COURSE - CS3CRT08 - DATA STRUCTURE USING C++

( Common to B.Sc Computer Applications Model III Triple Main, B.Sc Computer Science Model III ,B.Sc Information Technology Model III, Bachelor of Computer Application)

2017 Admission Onwards

2D440292

Maximum Marks: 80

Part A Answer any ten questions.

Each question carries 2 marks.

- What you meant by non-primitive data structure? Give example. 1.
- What is difference between linear and binary search? 2.
- Define infix, prefix, postfix expressions? 3.
- 4. What are double ended queues?
- 5. What is the significance of NULL pointer in a linked list?
- 6. What are the steps involved in deleting the first node from a linked list
- 7. What is garbage value?
- 8. Write a note on binary tree?

经终端条约的

Time: 3 Hours

**Reg No** : Name : .....







- 14. Explain the working of selection sort
- 15. Explain the concept of stacks along with their implementation in memory
- 16. What is circular queue? Describe briefly the different operations can be performed on circular queues?
- 17. Briefly explain doubly linked list? Write an algorithm or program for inserting a new node into a doubly linked list.
- 18. How can we dynamically implement stack and queue?
- 19. Explain complete binary tree with an example ?
- 20. Create a binary search tree using given elements through step by step procedure : 10,12,5,4,20,8,7,15,13
- 21. What is hashing? Explain with suitable example?

(6×5=30)

## Part C

## Answer any **two** questions. Each question carries **15** marks.

- 22. Explain sparse matrix representation with operations.
- 23. Explain organization and operations on queue with example
- 24. Explain trees and tree terminologies with an example diagram of degree 3.
- 25. Explain the following : 1) Linked File Organization 2) Inverted File Organization

(2×15=30)