

D 32685

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Name.....

Reg. No.....

**FIRST SEMESTER M.Sc. DEGREE (REGULAR/SUPPLEMENTARY)
EXAMINATION, NOVEMBER 2022**

(CBCSS)

Computer Science

CSS 1C 02—ADVANCED DATA STRUCTURES

(2019 Admission onwards)

Time : Three Hours

Maximum : 30 Weightage

Part A

*Answer any **four** questions.
Each question carries 2 weightage.*

1. What are the main operations of linear data structure ?
2. Give a note on array ?
3. Define Tree.
4. What is graph traversal ? What are the two traversal strategies used in traversing a graph ?
5. Define Hashing.
6. Write about binominal queue.
7. What do you mean by a heap data structure ?

(4 × 2 = 8 weightage)

Part B

*Answer any **four** questions.
Each question carries 3 weightage.*

8. Explain about quality of algorithms in data structure.
9. Define Queue. Explain about operations of queue data structure.
10. Discuss insertion and deletion operation on Stack.
11. Explain various operations on BST with an example.

Turn over

12. Describe about linear and quadratic probing strategies.
13. Briefly explain about types of heap data structure.
14. Write about skew heaps.

(4 × 3 = 12 weightage)

Part C

*Answer any two questions.
Each question carries 5 weightage.*

15. Explain how to analysis an algorithm with suitable example.
16. Write a detailed note on M-way trees.
17. Describe about double hashing algorithms and its implementations.
18. Consider the following Max heap

50 ,30, 20, 15, 10, 8, 16.

Insert a new node with value 60.

(2 × 5 = 10 weightage)