

A
(21222)
BCA-III Sem.

(Printed Pages 3)

Roll No. _____

18012

B.C.A. Examination, Dec.-2022

Data Structure Using C and C++

(BCA-302)

Time : Three Hours] Maximum Marks : 75

Note : Attempt question from **all** sections as per instructions.

Section - A

(Very Short Answer Type Questions)

Note : Attempt all **five** questions. Each question carry 3 marks.

1. Explain how two dimensional array is stored in memory?
2. What is priority queue?
3. What is linked list?

4. Explain B-tree.
5. What is hashing?

Section-B

(Short Answer Type Question)

Note : Attempt any two out of the following three. Each carry 7½ marks.

6. Explain stack by using linked list with suitable example.
7. Write a program of multidimensional array. (m×n)
8. Define structure and union with supportive example.

Section-C

(Long Answer Type Questions)

Note : Attempt **any** 3 questions out of 5 question. Each carry 15 marks.

9. (a) Explain the method of deletion in single linked list.

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- (b) What is the sorting? Explain selection sort.
10. (a) What is hashing? Explain different type of hash function.
- (b) What is Binary tree? How will you search in Binary tree.
11. What is tree. Explain type of trees if any. Give the traversal of Binary tree with algorithm and supportive example of all traversal.
12. Explain heap sort and show step by step procedure to sort the data using heap sort technique.
13. (a) Differentiate Binary and linear search with supportive example.
- (b) Discuss the properties of B-tree in detail.