

B.Com DEGREE EXAMINATIONS :: **October , 2021**

COMPUTER SCIENCE

(New Regulation 2020 - 21)

Paper-II : Data Structures using C

(New Regulations 20-21)

Time : 3 Hours

Max. Marks: 75

Section –A [5 x 5 =25]

Answer any **FIVE** of the following questions.

1. What is an algorithm? Explain the important features of an algorithm.
2. Write about non linear data Structures.
3. Explain briefly about Queues.
4. What are the properties of a binary tree?
5. Explain Linear searching with an example.
6. What is an ADT? Explain about the Abstract Data Type.
7. What is a graph? Explain the linked representation of graphs.
8. Write a brief note on circular queues.

Section –B [5 x 10 =50]

Answer **ALL** questions.

- 9a. Explain the difference between Abstract Data Type and primitive data type.

(OR)

- 9b. Explain the different approaches in designing an algorithm.

- 10a. Explain about Two dimensional arrays.

(OR)

- 10b. What is a linked list? Explain the basic operations on a linked list.

- 11a. Discuss about representation of stacks through arrays.

(OR)

- 11b. Explain about queues.

- 12a. Discuss about the operations on a binary search tree.

(OR)

- 12b. Discuss about binary trees as a non linear data structure.

- 13a. Write a program and explain about bubble sort.

(OR)

- 13b. Write about graph traversal.

