

NS2-361

B.Com DEGREE EXAMINATION: OCTOBER,2022

SECOND SEMESTER

Computer Science

Paper –II: DATA Structures using C

(NEW REGULATION 20-21)

Time: 3Hours

Max.Marks:75

SECTION-A

Answer any FIVE of the following Questions.

5X5=25

- 1 What are data types in ADT?
- 2 Write about Big 'O' Notation
- 3 What is pointer and its types?
- 4 What are the major advantages of linked lists over arrays
- 5 Explain the applications of Stacks
- 6 Explain queue ADT
- 7 What is linear search explain?
- 8 What is a graph? Explain the properties of graphs.

P.T.O

SECTION-B

Answer any FIVE of the following Questions.

5X10=50

- 9 (a) What is data structure? What are the advantages and disadvantages of data structure and storage structure? Explain.
- (b) Explain about different approaches to designing an Algorithm
- 10 (a) What is an array? Discuss different types of array with examples.
- (b) What are the various types of linked list ? Explain with examples
- 11 (a) Explain linked list implementation of stacks
- (b) Explain double ended queue and its operations
- 12 (a) Write in-order, pre-order and post-order traversal of a binary tree.
- (b) List the properties of binary search tree. Write an algorithm to search an element from a binary search tree.
- 13 (a) Define binary search tree. Show how to insert and delete an element from binary search tree.
- (b) What is spanning trees? Explain with neat diagram.
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