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SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
BTECH I Year II Semester Supplementary Examinations Dec 2019
DATA STRUCTURES THROUGH C
(CSE & CSIT)

Time: 3 hours

Max. Marks: 60

(Answer all Five Units 5 x 12 = 60 Marks)

UNIT-I

- 1 Discuss the following operations on One-Dimensional array with algorithms? 12M
(i). Merging (ii). Deletion (iii). Searching

OR

- 2 Write short notes on the following concepts: 12M
(i). Sparse Matrix (ii). Comparison between arrays and Linked lists
(iii). Advantages of Circular over Single Linked List.

UNIT-II

- 3 How to convert an Infix expression into Postfix expression, explain through an example. Convert the following Infix expression to Postfix:
 $(A+B)^C-(D*E)/F$ 12M

OR

- 4 a Discuss the various operations on a Stack using Arrays? 6M
b Write short notes on (i). DEQUE (ii). Priority Queue 6M

UNIT-III

- 5 Write about Traversal Operations on a Binary Tree with algorithms? 12M

OR

- 6 a Discuss about Set Representation of a Graph 6M
b Discuss about Linked List Representation of a Graph 6M

UNIT-IV

- 7 Discuss the Bubble sort algorithm and sort the following elements using it? 12M
12 98 67 44 88 70

OR

- 8 Write detailed notes on External Merge sort? 12M

UNIT-V

- 9 What is Hash table and explain any two Hash functions with an example? 12M

OR

- 10 Write and discuss the algorithm for Binary search through an example? 12M

*** END ***