

(DCS / DIT 214)

B. Tech. DEGREE EXAMINATION, MAY - 2015

(Examination at the end of Second Year)

COMPUTER SCIENCE & IT

Paper - IV : Data Structures

Time : 3 Hours

Maximum Marks : 75

Answer question No. 1 compulsory

Answer ONE question from each unit

- 1) Write shorts on : (5 × 3 = 15)
- a) Define polynomial ADT.
 - b) What is stack?
 - c) What is Binary tree?
 - d) What is AVL tree?
 - e) Define time complexity of Quick sort.

Unit – I

- 2) What is circular linked list and explain insertion and deletion operations with suitable example? (15)

OR

- 3) Explain double linked list operations with examples? (15)

Unit – II

- 4) What is Queue ADT? Explain its operations? (15)

OR

- 5) What is infix expression and post fix expression? Convert infix expression to post fix expression? (15)

Unit – III

- 6) What is Quick sort? Write an algorithm to implement Quick sort and give suitable example? (15)

OR

- 7) What is internal sorting? Write a program to implement merge sort with example? (15)

Unit – IV

- 8) Explain Binary search tree operations in detail? (15)

OR

- 9) What is splay tree? Explain operations of splay tree with examples. (15)

