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SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)

MCA I Year II Semester (R16) Regular Examinations May/June 2017

DATASTRUCTURES

(For Students admitted in 2016 only)

Time: 3 hours

Max. Marks:60

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

UNIT-I

- 1 Define hashing function. Explain any two Hashing functions with examples. 12M

OR

- 2 Discuss the Algorithm of merge sort with an example. Derive its time complexity. 12M

UNIT-II

- 3 What is linked list? Write and explain the algorithm for create and traverse operations in single linked list with example. 12M

OR

- 4 Explain the doubly linked list in detail. 12M

UNIT-III

- 5 Write a procedure to convert an infix expression into postfix form. Explain it by an example. 12M

OR

- 6 Give brief description about the priority queues. 12M

UNIT-IV

- 7 What is B-tree of order m.? Write insertion and deletion operations on the same. 12M

OR

- 8 What is heap? Explain algorithm for heap sort with an example. 12M

UNIT-V

- 9 Define graph. Explain various operations on graphs. 12M

OR

- 10 Explain BFS algorithm with example. 12M

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