Reg. No: | | | | | | | | | |

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
B.TECH I Year II Semester (R16) Regular Examinations June 2017
DATA STRUCTURES THROUGH C
(Computer Science & Engineering)
(For Students admitted in 2016 only)

Time: **3 hours**　　　　　　　　　　　　　　　　　　　　　Max. Marks:**60**

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

UNIT-I

1	What is a One-dimensional Array? Explain any three operations on arrays with suitable algorithm?	12 M

OR

| 2 | Explain how Linked list can be applied to Sparse matrix manipulations? | 12 M |

UNIT-II

| 3 | Explain about different type of structures to represent Queue data structure? | 12 M |

OR

4	a	Explain the algorithm for converting Infix expression into postfix Expression?	6 M
	b	Convert the following Infix expression into Postfix expression.	6 M

(A+B) ^ C ^ D * E – F/G

UNIT-III

| 5 | What is a Heap Tree? Explain any two operations on Heap tree with algorithm? | 12 M |

OR

| 6 | What is meant by Graph Traversal? Explain DFS and BFS algorithms for graph traversal with example? | 12 M |

UNIT-IV

| 7 | Explain Selection sort algorithm with a suitable example? And analyze the time complexity of Selection sort? | 12 M |

OR

| 8 | Explain Binary merge operation with algorithm and a appropriate example? | 12 M |

UNIT-V

| 9 | Explain and analyze the Binary Search algorithm with a suitable example? | 12 M |

OR

10	a	What is Hash Table? Explain any two hashing Functions?	6 M
	b	Explain Open Hashing Collision resolution Technique?	6 M

*** END ***