

S.NO. 172

BATCH: 2007 - 2016

Reg. No.

7

END OF SEMESTER EXAMINATIONS, NOVEMBER -2017

DATA STRUCTURES AND ALGORITHMS

SUBJECT CODE: 16UACT05 /08UAI08

MAJOR: B.Sc., (Computer Technology) /IT

SEMESTER : III

TIME : 3 HOURS

MAX. MARKS: 75

SECTION - A (5 X 2 = 10)

Answer all the Questions:

1. What is a Data Structure?
2. What is an Array?
3. Define: Recursion.
4. What is a Tree?
5. Define: Sorting.

SECTION - B (5 X 4 = 20)

Answer all the Questions:

6. a) Describe the Data Structure Operations.
(OR)
b) Write a note on Control Structure.
7. a) Explain Pointers.
(OR)
b) Write an algorithm to Insert a node in the beginning of the Linked List.
8. a) What are the operations of a Stack?
(OR)
b) Explain Queues & its Operations.
9. a) Describe the traversal algorithms using stacks
(OR)
b) What is a graph?. Mention its applications.
10. a) Explain the various Searching Techniques.
(OR)
b) Describe the Data Modification.

SECTION - C (3 X 15 = 45)

Answer any THREE Questions:

11. Explain the Mathematical Notations and Functions.
12. Describe the Linked List & its Operations.
13. Explain the quick sort with an example.
14. Describe the Warshall's algorithm for Shortest Path.
15. Explain Merge Sort with an example.
