

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
MSc DEGREE EXAMINATION MAY 2018
(Second Semester)

Branch –SOFTWARE SYSTEMS
(Five year integrated)

DATA STRUCTURES

Time: Three Hours

Maximum: 75 Marks

SECTION -A (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks (5 x 6 = 30)

- 1 a What is Data structure? Discuss on it.
OR
b How will you process a string? Explain.
- 2 a Give the pseudo code for Bubble sort and explain with an example.
OR
b Expound on sequential search.
OR
- 3 a Write short notes on priority list.
OR
b How will you insert an element in a Linked List? Explain with diagram.
- 4 a Define stack and stack operations.
OR
b Explain the concept of priority queue.
- 5 a What do you mean by Binary tree Traversing? Give example for in order, pre order and post order traversal.
OR
b Discuss in detail about graph terminologies.

SECTION -B (45 Marks)

Answer any THREE questions

ALL questions carry EQUAL Marks (3 x 15 = 45)

- 6 Give a brief note on sparse matrices.
- 7 Write a program to implement binary search algorithm.
- 8 Discuss on linked list operations.
- 9 Write short notes on circular queue and dequeue.
- 10 Explain in detail about shortest path problem. Give algorithm.