

**PSG COLLEGE OF ARTS & SCIENCE**  
(AUTONOMOUS)

**MSc DEGREE EXAMINATION DECEMBER 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? Explain.  
OR  
b Discuss about sparse matrices with example.
- 2 a Explain in details about bubble sort with example.  
OR  
b Describe sequential search with example.
- 3 a Examine dynamic memory allocation with example.  
OR  
b Write down doubly linked list,
- 4 a Discuss about stack.  
OR  
b Elaborate linked queue with example.
- 5 a What is tree? Explain.  
OR  
b Write down binary tree traversal.

**SECTION -B (45 Marks)**

Answer any **THREE** questions

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

- 6 Briefly explain about string processing.
- 7 Explain about radix sort with example.
- 8 Write down traversing in list with example.
- 9 Discuss about priority queue with example.
- 10 Explain about graph representation.