

B.Sc. DEGREE EXAMINATION, DECEMBER – 2015

(Examination at the end of First Year)

Part - II : INFORMATION TECHNOLOGY


Paper - III : Data Structures

Time : 3 Hours

Maximum Marks : 70

Answer any five questions

All questions carry equal marks

- 1) a) Define Data Structure. Discuss about the different types of data structures.
b) Define Algorithm? Mention the features of an Algorithm. 
- 2) What is meant by recursion. Discuss about the recursive procedure with an example.
- 3) Write about Strings and its operations with examples.
- 4) a) Explain about Two dimensional Array with examples.
b) Write an Algorithm to find the length of a string.
- 5) a) Discuss about the operations performed on Queues.
b) Define pointer? Mention the advantages and disadvantages of pointers?
- 6) a) Write an algorithm for sorting n elements in an array.
b) Convert the Infix expression into prefix notation.
$$a + b * c - d * e / f * g$$
- 7) a) What is a Linked list? Explain different types of Linked lists.
b) Explain basic operations performed on single Linked List.

- 8) a) What is stack? List the applications of stacks.
- b) Discuss about priority Queues.
- 9) Write about Traversal techniques with examples.
- 10) Explain the producer for Linear search and Binary search with examples.

