

# Data Structure and Algorithms : 2015

## Section - 'A' (Objective Type Questions)

Q.1. Choose the correct answer.

(i) Representation of data structure in memory is known as-

(a) Recursive (b) Abstract data type

(c) Storage structure (d) None

(ii) Queue is a form of-

✓ (a) First in first out (FIFO)

(b) Last-in-first out (LIFO)

(c) Random manner (d) None of them

(iii) Which one is non linear data structure:

(a) Queue (b) Linked list

✓ (c) Tree (d) None

(iv) Inorder traversal of binary tree

✓ (a) Left Root Right (b) Root Left Right

(c) Left Right Root (d) None of these

(v) The best average behaviour is shown by

(a) Quick sort (b) Merge sort

(c) Insertion sort (d) Heap sort

## Section - 'B' (Short Answer Type Questions)

Q.2. Define types of array. ✓

Or Define all types of Data Structure. ✓

Q.3. Explain application of Stack. ✓

Or Discuss dequeue with examples.

Q.4. What do you mean by linked list? ✓

Or What is circular linked list? ✓

Q.5. Differentiate between tree and complete binary tree. ✓

Or Explain binary search tree. ✓

Q.6. Define Graph. ✓

Or Differentiate between searching and sorting. ✓

## Section - 'C' (Long Answer Type Questions)

Q.7. Describe the row-major and column-major order of two dimensional array accessing functions. ✓

Or Define data structure? Write its advantages and disadvantages. ✓

Q.8. Write down the algorithm to insert an element in queue. ✓

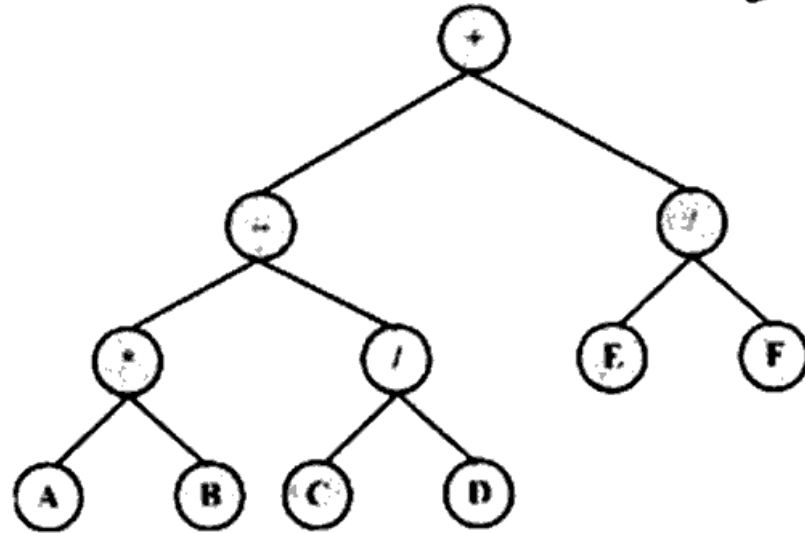
Or Transform the following infix expression to prefix and postfix form  $(A + B)/D - E$ . ✓

Q.9. Explain doubly linked with its operation and write its algorithm. ✓

Or Write short notes on Header linked list.

Q.10. Define Tree. Write algorithm to insertion operation. ✓

Or The following tree are traversal to preorder. ✓



Q.11. Explain selection sort in details. ✓

Or Write short notes on Depth first search.

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