2316

75

Class – BCA-4thSem.
Subject – Data Structure

Time Allowed : 3 Hours   Maximum Marks : 75

Note:- Attempt any 5 out of 8 questions.

1. (a) Discuss Time space Trade off.   7

   (b) What do you mean by complexity of an algorithm? Explain with an example.   8

2. Explain Quicksort Algorithm in detail. Also write a suitable example.   15

3. (a) Differentiate between Stack & Queue.   7

   (b) Explain Basic operations performed in data structure.   8

4. What is Linked List? Write the algorithm for Insertion of a node in the linked list.   15

5. (a) What are PUSH & POP operations in Stack?   7

   (b) What is String Processing in data structure?   8

6. Explain :

   (a) What is Multidimensional Array?

   (b) Doubly Header linked list.

   (c) Circular Header linked list. $(5 \times 3 = 15)$

7. Explain Binary Search Algorithm with suitable example with its complexity.   15

8. Explain :

    (a)   Recursion with suitable example

    (b)   Avail list

    (c)   Deque with example $(5 \times 3 = 15)$

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