

Bhagwan Mahavir College of Engineering & Technology, Surat

Computer engineering (5th semester)

Analysis and designs of algorithm

Assignment-2

1. Explain the concept of space complexity.
2. Analyze the following Control statements with suitable examples.
 1. Sequencing
 2. For loops
 3. Recursive calls
 4. While & Repeat loops
3. Explain Best, Worst & Average case analysis.
4. Solve the following Recurrence relation using forward & backward substitution.
$$T(n) = T(n-1) + 1$$
5. Write down Selection sort & Bubble sort algorithm & analyze it.
6. Write a general method for Divide & Conquer & explain one application that can be solved using Divide & Conquer.
7. Write algorithm for Quick sort, Merge sort & also write Recursive & non recursive Binary Search algorithm.
8. Divide & Conquer can be applied to merge sort? Also analyze merge sort algorithm.
9. Solve the following list using Quick & Merge sort.
$$40, 30, 20, 60, 70, 10, 50, 80, 90$$
10. Explain Divide & Conquer strategy for sorting the elements using quick sort.

Last Date to submit: 31/07/2017