

Sardar Vallabhbhai National Institute of Technology, Surat

Design and Analysis of Algorithms

End Semester Exam December 2017

Exam Date : 28/11/2017

Exam Time : 2:00 PM to 5:00 PM

Total Marks : 50

Instructions :

1. Write your roll no. and other necessary details clearly on Answer book and Question Paper.
 2. Assume necessary data but give proper justification.
 3. Be precise and clear in answering all questions.
 4. Figure to the right indicate full marks of that question.
 5. Please start answer to new question on new page.
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Q-1 Answer the Following

[20]

- 1) Define the asymptotic notation Big Omega.
- 2) Write algorithm using iterative function to find sum of n numbers.
- 3) Define the asymptotic notation Big Oh
- 4) What is time complexity?
- 5) Write the For LOOP general format.
- 6) Define Little Omega.
- 7) Define the asymptotic notation Theta
- 8) What is recursive algorithm?
- 9) Define Little theta
- 10) What is performance measurement?

Q-2 Answer the Following

[30]

- 1) Describe the recurrence relation of merge sort?
- 2) What is the Quick sort?
- 3) Write an algorithm for straightforward maximum and minimum
- 4) Define internal path length.
- 5) Define control abstraction.
- 6) What is the substitution method?
- 7) What is the maximum and minimum problem?
- 8) Define external path length?
- 9) Is insertion sort better than the merge sort?
- 10) Write the algorithm for Iterative binary search?

ALL THE BEST!