

II B.Tech I Semester(R07) Supplementary Examinations, May/June 2010

ADVANCED DATA STRUCTURES AND ALGORITHMS

(Common to Information Technology and Computer Science & Systems Engineering)

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. (a) When a *catch* (.....) handler is used? What should be placed inside a catch block?
(b) When do we use multiple *catch* handlers? Give an example. [8+8]
2. Write a program that substitutes an overloaded $+$ = operator for the overloaded operator $+$ for concatenating Strings such as $S1 + = S2$ where $S2$ is added(concatenate) to $S1$ and the result is left in $S1$. [16]
3. (a) What are the interest reasons to perform space complexity?
(b) What are the interest reasons to perform time complexity? [8+8]
4. Extend the class Skip-List by including functions to delete the element with least value, delete the element with largest value and the output the elements in ascending order of value. [16]
5. Explain in detail about Poly phase Merge with example. [16]
6. Explain in detail about the Search operation on a Binary search tree. [16]
7. Write Quick Sort algorithm which uses random partitioning element. Trace it with sample data. [16]
8. Compare Dynamic programming and Divide and Conquer in solving problems. [16]
