University of Hyderabad, Department of Computer and Information Sciences

Parallel Computing
Minor-I

Max. Marks: 20   **Date: September 17th, 2009**
                                                       Duration 60 min.

Note: 1. Attempt <u>all</u> questions.
      2. Draw neat diagrams, if needed.

Q.1 What problems are associated with Shared Data in UMA and NUMA **[4]**
Multiprocessors systems?

Q.2 Propose an efficient parallel algorithm for merging two sorted lists. **[4]**
Calculate parallel time and processor's complexities.

Q.3 If 95% of a program's execution time occurs inside a loop that can be **[4]**
executed in parallel, what is the maximum speedup we should expect
from a parallel version of a program that is executed on 8 CPU's?

Q.4 What do you understand by the concept of reducing the number of **[4]**
processors in the PRAM computations? Explain with an example.

Q.5 What is a Cluster? What parameters do you use to classify clusters? **[4]**

------Best of Luck------