

Roll No.

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Total No. of Pages : 01

Total No. of Questions : 08

M.Tech.(IT) (2015 & Onwards E-I & II)/(CSE Engg.) (E-III) (Sem.-3)

PARALLEL COMPUTING

Subject Code : CS-517

Paper ID : [E0697]

Time : 3 Hrs.

Max. Marks : 100

INSTRUCTION TO CANDIDATES :

1. Attempt any FIVE questions out of EIGHT questions.
2. Each question carry TWENTY marks.

1. Explain the following :
 - a. Cloud computing
 - b. Distributed memory networks
 - c. Flynn's classification
 - d. Handler's classification
2.
 - a. What are the main structures/techniques used for parallelizing a sequential program?
 - b. Running a program on two parallel processors does not halve the complexity of the algorithm. What are the reasons for it?
3. What is the PRAM model? Which PRAM model can be used to execute any other PRAM algorithm and how?
4. Explain scheduling techniques for parallel programs.
5. Compare the following :
 - a. SPMD and SIMD.
 - b. Shared and distributed memory programming approaches.
6.
 - a. What is the criterion for the paradigm selection in the parallel programming?
 - b. What are the types of parallel computers? Explain the features of each.
7. Explain embedding and simulations in detail.
8. Design a cost-optimal algorithm for computing the prefix sums of n numbers on a PRAM and justify whether the algorithm you have designed is cost-optimal or not.