

Roll No.

Total No. of Pages : 01

Total No. of Questions : 08

M.Tech (CSE) (2019 Batch) (Sem.-3)

**COMPILER FOR HPC**

Subject Code : MTCS303-18

M.Code : 76510

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTIONS TO CANDIDATES :**

1. Attempt any FIVE questions out of EIGHT questions.

2. Each question carries TWELVE marks.

1. Discuss the structure of a compiler for HPC.
2. Write a detailed note on Factor Use-Def chains.
3. Describe array region analysis, pointer analysis and inter-procedural analysis.
4. How fusion and fission is used for optimizing for locality?
5. Differentiate between concurrency from sequential and parallel loops.
6. What is a vector code? Also discuss about multi-vector computers.
7. Differentiate between SIMD and MIMD machines. How remote data is accessed?
8. Discuss the future trends in compiler design and message passing machines for HPC.

**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**