

**Roll No.**

**Total No. of Pages : 01**

**Total No. of Questions : 08**

**M.Tech (CSE) (2018 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 HPS.
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.**