Total No. of Questions : 09

B.Tech. (CSE) (Sem.-7/8) PARALLEL COMPUTING Subject Code : BTCS-714-18 M.Code : 90505 Date of Examination : 22-01-23

Time : 3 Hrs.

Max. Marks : 60

Total No. of Pages : 02

INSTRUCTIONS TO CANDIDATES :

- 1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
- 2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
- 3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A

- 1. Write briefly :
 - a) Parallel Computation
 - b) SPMD
 - c) Handler's Classification
 - d) Embedding
 - e) PRAM Models
 - f) Sorting Networks
 - g) Multi-Cache Memory
 - h) Pipelining
 - i) Kung's Taxonomy
 - j) Vector processors

SECTION-B

- 2. Discuss overheads involved in parallel computations.
- 3. What are the main structures and techniques used for parallelizing a sequential program?
- 4. Draw block diagram to discuss Flynn's classification of Computer Architecture.
- 5. Considering various performance parameters like speedups, efficiency, utilization etc., discuss in detail laws governing performance metrices for parallel computation.
- 6. Differentiate SIMD and MIMD architecture.

SECTION-C

- 7. Discuss Combinational circuits in relation to parallel computational models in detail.
- 8. Discuss the following:
 - a) Reduction paradigm
 - b) Functional and data flow programming.
- 9. Discuss and compare array and vector processors.

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.