SHAHEED BHAGAT SINGH STATE TECHNICAL CAMPUS, FEROZEPUR

ROLL No: | | | | | | | | | | Total number of pages: 11

M.Tech. || CSE || 3rd Sem.

Parallel Computing

Subject Code: CS – 517

Paper ID:

Time Allowed: 3 Hrs **Max Marks: 100**

Important Instructions:

- Attempt any five questions
- Each question carries 20 marks

Q. 1. What is a Parallel algorithm? Discuss the issues in the design of Parallel computers.

Q. 2. a) Explain Flynn's Classification of multiprocessors.

b) Explain Kung's taxonomy of parallel systems.

Q. 3. a) Differentiate between Shared memory and Distributed memory programming models.

b) What is PRAM? How it is different from a RAM model?

Q. 4 a) Differentiate between SIMD and MIMD architectures.

b) What is SPMD? Where is it used?

Q. 5. Explain different laws and performance metrics that can compute the performance of a parallel program.

Q. 6. What is a computational model? Explain in brief various computational models.

Q. 7. a) Differentiate between Uniform and Non-uniform Memory access.

b) Explain Systolic arrays.

Q. 8. Write short notes on following:

a) Pipelining vs Parallelism

b) Data vs Control Parallelism