Seat No.:	Enrolment No.

## **GUJARAT TECHNOLOGICAL UNIVERSITY**

MCA - SEMESTER-V • EXAMINATION – SUMMER • 2015

	•	t Code: 2650005 Date: 08-05-2015	
	•	Name: Parallel Programming	
	me: ( tructio	02:30 pm to 05:00 pm Total Marks: 70	
	1 2	Attempt all questions.	
Q.1	(a)	Answer the following questions [1.] List all characteristics of good parallel program. Explain how Vision and Ocean circulation differ. [2.] Explain terms (1.)SIMD (2.) MISD	05 02
	(b)	What is shared memory? Explain shared memory architecture models with diagram.	07
Q.2	(a) (b)	Explain how Sequential Programming differs with parallel Programming? Explain what is usage of Parallelism in Sequential Machines?	07 07
	(b)	OR List all Parallel Computers and Explain Cluster Computer & Supercomputers.	07
Q.3	(a) (b)	Explain Classification of Pipeline Processors.  [1] Explains Difference of Memory vs. Parallelism.  [2] Explains Difference of Overhead vs. Parallelism.  OR	07 04 03
Q.3	(a) (b)	[1] Explain Difference of Forward Dependency vs. Backward Dependency. [2] List the Type of Dependency. And explain any two dependencies. What is loop splitting? What is loop interchange? Explain difference of loop splitting & loop interchange.	03 04 07
Q.4	(a) (b)	Writes a simple UNIX program that perform Odd/Even interchange to alphabetize a list L of recodes on field x.  What is message passing model? Explain collective communication in message passing interface.	07 07
0.4	( )	OR	0.7
Q.4	(a)	Writes a simple UNIX program that performs fixed 26-ways parallel solution to alphabetizing.	07
	(b)	Explain point to point communication in message passing interface with example.	07
Q.5	(a) (b)	Write a short note on Histogram Computation.  Explain following MPI routines  [1.] MPI_Wait() [2.] MPI_Scan() [3.] MPI_Recv() [4.] MPI_Free_mem()  OR	07 07
Q.5	(a) (b)	Write a short note on POSIX functions. What is PVM? Explain how one task send message to another task in PVM.	07 07
		***	

\*\*\*\*\*