



Sardar Patel Institute of Technology

Bhavan's Campus, Munshi Nagar, Andheri (West), Mumbai-400058-India
(Autonomous Institute Affiliated to University of Mumbai)

Course Code	Course Name	Teaching Scheme (Hrs/week)			Credits Assigned				
		L	T	P	L	T	P	Total	
CPCL803	Parallel and Distributed Systems Lab	--	--	2	--	--	1	1	
		Examination Scheme							Total
		ISE		ESE			Total		
				Practical	Oral				
		40	-		20		60		

Pre-requisite Course Codes	CPC803(Parallel and Distributed Systems)	
At end of successful completion of this course, student will be able to		
Course Outcomes	CO1	The student gains clear understanding of fundamental principles of Parallel and Distributed Systems.
	CO2	The student understands the message communication, remote procedure call and Remote method invocation (RPC and RMI) along with group communication.
	CO3	Emphasis is on developing applications using current distributed computing technologies like EJB, CORBA.
	CO4	Analyze different token based and non-token based algorithms for the design and development of distributed systems subject to specific design and performance constraints.

Exp. No.	Experiment Details	Ref.	Marks
1	A program to implement simple calculator operations like addition, subtraction, multiplication and division using RPC.	2,3	5
2	Write a program to show the object communication using RMI. a)RMI based application program to display current date and time. b)RMI based application program that converts digits to words, e.g. 123 will be converted to one two three.	2,3	5
3	To implement CORBA mechanism by java program.	3	5
4	Implement Load Balancing Program in Java.	1	5
5	Show the implementation of logical lamport clock synchronization algorithm.	1	5
6	Implement Suzuki Kasami Token Based Algorithm.	1	5
7	Case Study on Distributed File System- AFS, NFS and HDFS.	2	5
8	Mini Project		5
Total Marks			40

References:

[1] M.R. Bhujade, "Parallel Computing", 2nd edition, New Age International Publishers 2009.



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[2] Andrew S. Tanenbaum and Maarten Van Steen, "Distributed Systems: Principles and Paradigms, 2nd edition, Pearson Education, Inc., 2007, ISBN: 0-13-239227-5.

[3] George Coulouris, Jean Dollimore, Tim Kindberg, "Distributed Systems: Concepts and Design" (4th Edition), Addison Wesley/Pearson Education.

[4] Pradeep K Sinha, "Distributed Operating Systems: Concepts and design", IEEE Computer society press