VIT
Vellore Institute of Technology

WINTER SEMESTER 2019-2020
Continuous Assessment Test – I
Programme Name & Branch: B.Tech (CSE)

Course Name & Code: CSE4001 Parallel and Distributed Computing
Class Number: ALL B1 Slots
Faculty Name: B1 Slot
Exam Duration: 90 Min
Slot: B1
Maximum Marks: 50

Section – A (4 x 5 = 20 Marks)

S.No.	Question	Course Outcome (CO)
1.	Compare shared vs distributed memory architectures.	
2.	Explain the MIMD architectural modelwith necessary examples.	
3.	Write an OpenMP program to perform product of $'n'$ array operations using shared and private clause.	

4.	Develop an execution schedule for the given code fragment for adding a list of four numbers using a two way superscalar processor.
	Load R1, @1000
	add R1, @1004
	add R1, @1008
	add R1, @100C
	store R1, @2000	

Section – B (3 x 10 = 30 Marks)

5.	Discuss the challenges in parallel programming with necessary examples.	
6.	Compare CPU and GPU. Illustrate the working principle of GPU architecture and its programming elements.	
7.	*Consider a cricketer's database with information about their batting. Compute the following query to get a desired result:* *Country = "India" and Batting type = "Right handed" and Year of Retirement = "2012" and Highest Score >= 200*	

Batsman ID	Country	Batting type	Year of Retirement	Runs Scored	Highest Score
SRT	India	Right handed	2012	18426	200
KCS	Sri Lanka	Left handed	2015	14234	169
RTP	Australia	Right handed	2012	13704	164
STJ	Sri Lanka	Left handed	2011	13430	189
JHK	South Africa	Right handed	2012	11579	139
SCG	India	Left handed	2012	11363	183
BCL	West Indies	Left handed	2007	10405	169
MEW	Australia	Right handed	2002	8500	173
VS	India	Right handed	2012	8944	264
MGB	Australia	Left handed	2004	6912	208

Draw a task dependency graph and find the average degree of concurrency.