SUBJECT CODE NO:- K-221
FACULTY OF ENGINEERING AND TECHNOLOGY
B.E.(CSE) Examination Oct/Nov 2016
Parallel & Distributed Computing
(Revised)

[Time: Three Hours]   [Max. Marks:80]

Please check whether you have got the right question paper.
N.B
        i) Q.No.1 and Q.No.6 are compulsory.
        ii) Attempt any two questions from Q.No.2 to Q.No.5 and from Q.No.7 to Q.No.10 of each section.
        iii) Figures to the right indicate full marks.

Section A

Q.1	a)	Explain the scope of parallel computing.	05
	b)	Explain the advantages of threaded programming models.	05
Q.2	a)	Write the example of sparse matrix –vector multiplication, explain the task interaction graph.	08
	b)	Explain the threads creation and termination in Pthreads API.	07
Q.3	a)	With an appropriate diagram explain CUDA memory types.	08
	b)	Explain the open MP programming model with suitable example.	07
Q.4	a)	Explain superscalar execution with an example.	07
	b)	With a neat diagram explain SIMD and MIMD architecture. Also give an example showing execution of conditional statements on SIMD architecture.	08
Q.5	a)	With a neat diagram explain the architecture of CUDA GPU.	07
	b)	Explain the following	08
		i) Store and forward routing	
		ii) Cut through routing.	

Section B

Q.6	a)	Distinguish between parallel systems and distributed system.	05
	b)	With an appropriate diagram explain architecture of distributed shared memory system.	05
Q.7	a)	Write a short note on Java RMI.	07
	b)	Explain any two consistency models in DSM.	08
Q.8	a)	With a suitable example explain the algorithm for vector clocks.	07
	b)	Explain the following models of distributed computation.	08
		i) Happened before model.	
		ii) Potential causality model.	
Q.9	a)	Explain the following terms in Hadoop	08
		i) Namenode and datanode	
		ii) Secondary namenode	
		iii) Job tracker	
		iv) Task tracker	
	b)	Explain the Lamport's algorithm for mutual exclusion in detail.	07
Q.10	a)	With a neat diagram explain the anatomy of a Map Reduce program.	08
	b)	Distinguish between RPC and RMI. Also explain RPC in detail.	07

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