

SUBJECT CODE NO:- P-52
FACULTY OF ENGINEERING AND TECHNOLOGY
B.E.(CSE) Examination May/June 2017
Parallel & Distributed Computing
(Revised)

[Time: Three Hours]

[Max.Marks:80]

Please check whether you have got the right question paper.

- N.B i) Q.1 & Q.6 are compulsory.
ii) Attempt any two questions from the remaining questions in SECTION A & SECTION B, each.
- Section A
- Q.1 a) State and explain the advantages of Threaded Programming models. 05
b) Define the following terms in CUDA. 05
i)Grid ii)Blocks iii)Threads
- Q.2 a)Explain the effect of memory latency with an appropriate example. How to improve the memory Latency? 08
b) With a neat diagram explain the different types of memory in the CUDA GPU. 07
- Q.3 a) Define Decomposition. Explain the method of Data decomposition with an example using output data Partition. 08
b) With the example of sparse matrix-vector multiplication, explain the task Interaction Graph. 07
- Q.4 a) Explain the Dynamic Interconnection network. Give two examples. 08
b)Explain OPENMP programming model. Also discuss the parallel and for directive in OpenMP. 07
- Q.5 a)With a neat state diagram, explain how the coherence is maintained using invalidate protocols. 08
b)Explain CUDA C program structure in detail. 07
- Section B
- Q.6 a)State and explain Limitations of Distributed System. 05
b)With a neat diagram explain general architecture of DSM Systems. 05
- Q.7 a)Explain the temporal ordering of events using vector clock algorithm. 08
b)Explain the method of communication between distributed objects and Remote Invocation. 07
- Q.8 a)Explain Lamport's algorithm for mutual exclusion using Timestamps. 07
b)Explain the following Hadoop Components. 08
i)Name Node & Datanode
ii)Secondary Name node
iii)Job Tracker
iv)Task Tracker
- Q.9 a)With a neat diagram explain the general MapReduce data flow. Give appropriate example. 07
b)With suitable examples explain the following Basic file management tasks in Hadoop. 08
i)Adding files & Directories ii)Retrieving files
iii)Deleting files.
- Q.10 a)Explain the Granularity and Thrashing issues in the implementation of DSM. 08
b)Explain any three consistency models in DSM. 07