SUBJECT CODE:- 272
FACULTY OF ENGINEERING AND TECHNOLOGY
B.E. (CSE) Examination Nov/Dec 2015
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 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.

Section A

Q.1   a) Explain the concept of VLIW processors.   05
       b) Define   05
          i)   Granularity
          ii)   Five grained decomposition
          iii) Coarse grained decomposition
          iv)   Degree of concurrency
          v)   Critical path length
Q.2   a) Explain SIMD and MIND architecture in detail. Also explain the execution of conditional statements on   08
          SIMD architecture.
       b) Explain recursive decomposition with appropriate example.   07
Q.3   a) Explain different factors for evaluating interconnection networks.   08
       b) Explain the OpenMP programming model with a suitable example.   07
Q.4   a) Explain the compilation and execution of CUDAC program with appropriate example.   08
       b) With a neat diagram explain CUDA memory types.   07
Q.5   a) With an appropriate example explain   08
          i)   Store and forward routing
          ii)   Cut through routing.
       b) With a neat diagram explain the architecture of CUDA GPU   07

SECTION-B

Q.6   a) Differentiate between parallel systems and distributed systems   05
       b) State and explain the advantages of DSM.   05
Q.7   a) With respect to distributed shared memory explain   08
          i)   Granularity
          ii)   Structure of shared memory space
       b) Explain the anatomy of MapReduce program with a neat diagram.   07
Q.8   a) With a suitable example explain the algorithm for vector clocks.   07
       b) Explain the following models of distributed computation.   08
          i)   Interleaving
          ii)   Happened before
          iii) Potential causality
Q.9   a) With suitable examples explain the common file management tasks in Hadoop.   08
       b) Explain the different configuration modes of Hadoop.   07
Q.10   a) What is a logical clock? With appropriate example explain the algorithm for logical clocks.   07
       b) Explain any three consistency models in distributed shared memory.   08

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