APR. -16/BE/Insem. - 80

B.E. (Computer Engineering)

HIGH PERFORMANCE COMPUTING

(2012 Pattern) (410450) (Semester - II)

Time : 1Hour]

[Max. Marks :30

Instructions to the candidates:

1) *Answer any three questions.*
2) *Neat diagrams must be drawn wherever necessary.*
3) *Assume suitable data if necessary.*

Q1) a) Explain Control structure of Parallel Platforms in detail. [4]

b) Explain basic working principal of Super scalar processor. [6]

OR

Q2) a) Differentiate between write - Invalidate and Write - Update Protocol. [6]

b) Describe the merits of Multi-threading over Pre-fetching technique. [4]

Q3) a) Explain Recursive Decomposition with suitable example. [5]

b) Explain Graph partitioning with suitable example. [5]

OR

Q4) a) Differentiate between spatial and temporal locality of reference. Enlist application where it is useful. [6]

b) Write a note on NVIDIA Tesla GPU. [4]

Q5) a) Illustrate MPI routines. [4]

b) Write note on: Topologies and Embedding. [6]

OR

Q6) a) Explain Non-Blocking communications using MPI. [4]

b) What are principles of Message Passing Programming. [6]

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