

Total No. of Questions :6]

SEAT No. :

P156

APR. -16/BE/Insem. - 80

[Total No. of Pages :1

**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]

