

BE INSEM
MAR-2017

Total No. of Questions : 6]

SEAT No. :

P71

[Total No. of Pages : 1

APR-17/BE/Insem.-81

B.E. (Computer Engineering) (Semester - II)

HIGH PERFORMANCE COMPUTING

(2012 Pattern)

Time : 1 Hour]

[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) What are applications of Parallel Computing? [4]
b) Explain basic working principal of VLIW processor. [6]

OR

- Q2)** a) Explain SIMD, MIMD and SIMT architecture. [6]
b) Write a short note on Dataflow Model. [4]

- Q3)** a) Explain Granularity, Concurrency, and Dependency Graph. [5]
b) What are the characteristics of Tasks and Interactions. [5]

OR

- Q4)** a) Explain Randomized block distribution and hierarchical mappings. [6]
b) Write a note on IBM Cell Broadband Engine (CBE). [4]

- Q5)** a) What are principles of Message Passing Programming. [4]
b) Write note on : Topologies and Embedding. [6]

OR

- Q6)** a) Explain Non-Blocking communications using MPI. [4]
b) Write short note on Blocking Message Passing Operations. [6]

