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]**

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