

Total No. of Questions : 4]

**PB262**

SEAT No. :

[Total No. of Pages : 1

[6270]-50

**B.E. (Computer Engineering) (Insem)**  
**HIGH PERFORMANCE COMPUTING**  
**(2019 Pattern) (Semester - VIII) (410250)**

*Time : 1 Hour*

*[Max. Marks : 30*

*Instructions to the candidates:*

- 1) Answer Q.1 or Q.2, Q.3 or Q.4.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right side indicate full marks.
- 4) Assume suitable data necessary.

- Q1)** a) Explain the impact of Memory Latency & Memory Bandwidth on system performance? [6]  
b) Write note on Communication costs in parallel machines? [5]  
c) Explain with suitable diagram STMD, MIMD architecture? [4]

OR

- Q2)** a) Explain basic working principle of Super scalar Architecture? [6]  
b) Describe UMA and NUMA multicomputer platforms? [5]  
c) What is VLIW processor? Write any two advantages of VLIW? [4]

- Q3)** a) Explain any three decomposition technique with example? [6]  
b) Describe mapping technique for load balancing? [5]  
c) What are the characteristics of tasks. [4]

OR

- Q4)** a) Explain in details parallel algorithm models? [6]  
b) Explain the different methods for Containing Interaction Overheads. [5]  
c) What are the characteristics of Inter-Task Interactions? [4]

