

GUJARAT TECHNOLOGICAL UNIVERSITY
M. E. - SEMESTER – I • EXAMINATION – WINTER • 2014

Subject code: 3715106**Date: 12-01-2015****Subject Name: Parallel Programming****Time: 02:30 pm - 05:00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

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|------------|-----|--|-----------|
| Q.1 | (a) | Discuss concepts of parallelism along with proper example. | 07 |
| | (b) | Explain Parallelism by pipelining with proper diagram. | 07 |
| Q.2 | (a) | What are categories of Flynn's for the Parallel Computers? Explain all four categories. | 07 |
| | (b) | Write short note on computers with distributed memory organization. | 07 |
| OR | | | |
| | (b) | Define and discuss architecture of multi core processor. | 07 |
| Q.3 | (a) | What is the role of interconnection of network in multiprocessor and multicomputer system? | 07 |
| | (b) | How parallelism can achieve and what are the levels of it? | 07 |
| OR | | | |
| Q.3 | (a) | Discuss MPI Point to point communication. | 07 |
| | (b) | Write short note on Distributed computing Vs Grid. | 07 |
| Q.4 | (a) | Explain some applications of grid computing. | 07 |
| | (b) | What are the types of cluster computers and explain them. | 07 |
| OR | | | |
| Q.4 | (a) | What is cluster and discuss components of cluster computing. | 07 |
| | (b) | What are challenges in HPC? | 07 |
| Q.5 | (a) | Discuss cluster architecture with proper support diagram. | 07 |
| | (b) | How message passing is done with or without SYSTEM BUFFER? | 07 |
| OR | | | |
| Q.5 | (a) | How to evaluate CPU performance? | 07 |
| | (b) | What is static and dynamic scheduling? | 07 |
