**Blue Waters Petascale Semester Curriculum v1.0**

**Unit 5: MPI**

**Lesson 1: Introduction to MPI**

**Exercise Instructions for Students**

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*We want to hear from you! Please let us know your experiences using this material by sending email to* [*petascale@shodor.org*](mailto:petascale@shodor.org)

1. What are different types of Parallel Computer Memory Architectures?
2. Describe MPI API?
3. What are the advantages and disadvantages of using MPI?
4. Name some Minimal Set of MPI Routines.
5. What is the programming model of MPI?
6. Explain communicators, broadcasting, reduction in MPI.
7. Describe Non-Blocking Communication.