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

**Unit 8: OpenACC**

**Lesson 1: Accelarating Scientific Applications**

**Sample Assessment**

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*Browse and search the full curriculum at*[*http://shodor.org/petascale/materials/semester-curriculum*](http://shodor.org/petascale/materials/semester-curriculum)

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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 computer architecture features are needed for OpenMP and OpenACC.
2. Why do compute intensive loops need speedup? Why not the whole program?
3. What is the main difference between OpenACC and OpenMP?
4. Describe a scenario or scientific application that could benefit from both OpenMP and OpenACC together as a hybrid programming example.
5. Which compilers support OpenACC and what are the advantages of using one over the other?
6. What is algorithm complexity? How is it evaluated?