Sample Assessment

a. What is the main difference between point-to-point communication and collective communication in MPI?
b. Why use MPI collective communication routines, instead of having programmers implement a tree/butterfly structure of their own for their applications?
c. Which process(s) in the MPI communicator calls the MPI collective communication routines, especially when data exchange is required?
d. Describe a scenario where an MPI application can make use of both point-to-point communication as well as collective communication routines?