

Parallel and Distributed Computing (6E / 6F) Quiz 05 (Spring 2022). Instructor: Dr. Syed M. Irteza		Name:
Date: 2022-05-30		Roll Number:
Total Marks: 15	Time Allowed: 10 mins	

1. Draw an image of two systems, one where you would prefer using OpenMP for parallel programming, and the other where you would prefer using MPI (6m)

One image for OpenMP should show a shared memory architecture

One image for MPI should show a distributed memory architecture

2. What MPI function would you use for synchronization among all the processes? (3m)

`MPI_Barrier()`

3. What is the opposite of cloud computing? Why would a small business prefer cloud computing as a way to host their business applications (speaking in economic terms)? (6m)

On premises, or on-prem, or on-site (2m)

The economic benefits for small businesses are (4m):

- *PAYG - pay-as-you-go-model: which means, you only need to buy compute and storage capabilities from cloud service providers on an hourly rental price, so we can fluctuate this according to our usage patterns within a day (provides scalability as well).*
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- *No initial infrastructure costs, i.e., for servers, UPS, generators, networking equipment, etc., and naturally lower maintenance costs as well.*