**Latency**

All of the following apply.

* Time for the information to travel through medium (cable or bus for instance). This is close to the speed of light. This factor is closed to negligible because it is small
* Communication protocol delays, such three-way handshake.
* Cashing form memory before send to network card.
* Delays in processing in network cards.

**My Questions:**

1. In calculating the overall computation time of a fixed input *N* in a network of parallel computing nodes we saw that by increasing the computational nodes ***p***past certain point leads to an increased overall computing time. Which of following is the main factor that.

* Latency
* Bandwidth
* None of the above.

1. Which of the following formulas represents the longest path between two nodes in a two-dimensional mesh, where p is number of nodes?

2( -1)

1. For a circular right shift in a ring topology, what would be the correct formula that represents correct remapping of the ranks? r =rank, s=shift value, p –number of nodes
2. Validate the following statement in terms of true or falls:

Problems best suited for parallel computations are that the ones in which computation is proportional to the volume of the input and communication is proportional to the boundary of the input.

1. In MPI Send and Receive functions there is additional information attached to the message being transmitted called envelope. Which of the following are valid components of the envelope?

* Rank of the receiver
* Rank of the sender
* Tag
* Communicator