Module 9 (Lectures 38-41) Introduction to Parallel programming

1. In an SIMD parallel computer,
   a) a single stream of instructions is fetched from memory and divided across all the processors of the parallel computer
   b) the execution of a single instruction is divided across all the processors of the parallel computer
   c) the same instruction is executed with the same data on all processors of the parallel computer
   d) the same instruction is executed with possibly different data on all processors of the parallel computer

2. In a 3-dimensional torus interconnect, each node has
   a) 3 neighbours
   b) 4 neighbours
   c) 5 neighbours
   d) 6 neighbours

3. In a snoopy invalidate cache coherence protocol
   a) all nodes must monitor the invalidate signals being broadcast
   b) all nodes must broadcast invalidate signals when they observe block fetches
   c) a node must broadcast an invalidate signal when it modifies a cache block in cache
   d) a node must respond to invalidate signals on blocks that it does not hold

4. An MPI communicator is
   a) a process that is sending a message
   b) a process that is receiving a message
   c) a process involved in a collective communication
   d) a set of processes that can communicate among themselves

5. Which of the following is not a collective MPI communication call?
   a) MPI_Bcast
   b) MPI_Scatter
   c) MPI_Reduce
   d) MPI_Comm_Rank