

HPC Quiz

Marks: 5

- The performance of an algorithm is improved because it supports
 - Scalability
 - Speed up
 - Both of the above**
 - None of the above
- Shared memory architecture is where,
 - Memory is allocated to processes individually
 - Single address space is visible to all processes**
 - Address space is allocated for storing temporary results
 - None of the above
- What is task throughput?
 - Time taken for a task to complete since a request for its made
 - Average time taken to complete a task
 - The number of tasks completed in a given time**
 - None of the above
- What is the time complexity of prefix sum in pram model?
 - $O(\log n)$**
 - $O(n)$
 - $O(n/2)$
 - $O(n-1)$
- What comparisons cannot be done in parallel?
 - Comparisons are done using divide and conquer approach
 - Comparisons for different levels of recursion**
 - There is no temporary memory is available for storing comparisons
 - None of the above
- Traversal of a graph is different than tree because.
 - There can be a loop in the graph**
 - DFS on a graph uses stack, while inorder traversal is recursive
 - Both of the above
 - None of the above
- The number of comparisons taken by Bitonic Sort is
 - $O(n/2)$
 - $O(\log n^2)$
 - $O(n \log^2 n)$**
 - $O(n)$
- A data race happens when there are two memory accesses in a program where both
 - Target the neighbouring locations
 - Target to complete the
 - Target the same location**
 - None of the above
- In parallel search on a sorted sequence how does the search proceeds
 - By ignoring one half of the array**
 - By considering both the half
 - Both of the above
 - None of the above
- Which of the following algorithms can be used to most efficiently determine the presence of a cycle in a given graph?
 - Depth First Search**
 - Breadth First Search
 - Prim's Minimum Spanning Tree Algorithm
 - Kruskal' Minimum Spanning Tree Algorithm