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NPTEL

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Courses » **Parallel Algorithms**   Announcements   **Course**   Ask a Question   Progress   FAQ

Unit 1 - How to access the portal

**Register for
Certification exam**

Course outline

How to access the portal

○ How to access the home page?

○ How to access the course page?

○ How to access the MCQ, MSQ and Programming assignments?

○ How to access the subjective assignments?

○ Quiz : Assessment 0

Week 01: Models of Computation

Week 02: Performance of parallel algorithms,Basic techniques

Week 03: Basic Techniques

Week 04: Comparator

Assessment 0

The due date for submitting this assignment has passed.
As per our records you have not submitted this   **Due on 2019-02-04, 23:59 IST.**
assignment.

1) Which of the options given below is the correct ranking by order of   *1 point*
growth of the following functions:

$(\text{i})\log^{(2)} n$ (ii) $2^{\log n}$ (iii) $\log\log n$ (iv) $(\log n)^{\log n}$

  ○ i - iii - ii - iv

  ○ iii - iv - i - ii

  ○ iv - i - iii - ii

  ○ iii - i - ii - iv

No, the answer is incorrect.
Score: 0

Accepted Answers:
iii - i - ii - iv

2) If $T(n) = T(n/2) + \log n$ for all $n > 1$, and $T(1) = 1$, then $T(n)$ is _____   *1 point*

  ○ $O(\log^{(2)} n)$

  ○ $O(n)$

  ○ $O(\log\log n)$

  ○ $O(\log n \log\log n)$

No, the answer is incorrect.
Score: 0

Accepted Answers:
$O(\log^{(2)} n)$

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$n^2, n \log n$

○

$n^2, n \log \log n$

○

$n \log n, n \log n$

No, the answer is incorrect.
Score: 0

Accepted Answers:
$n^2, n \log n$

4) Given are an unweighted undirected graph $G = (V, E)$ and a vertex s in G. It is   **1 point**
required to find the shortest paths from s to all vertices in G. Which of the following is the MOST
APPROPRIATE algorithm for this purpose?

○ DFS

○ BFS

○ Dijkstra's algorithm

○ The Bellman-Ford algorithm

No, the answer is incorrect.
Score: 0

Accepted Answers:
BFS

5) The connected components in an unweighted undirected graph on n vertices and m edges **1 point**
can be found in $O(f(n))$ time. In the above sentence, which of the following forms the MOST
APPROPRIATE choice for $f(n)$?

○

$n + m$

○

nm

○

$n \log n$

○

$m \log n$

No, the answer is incorrect.
Score: 0

Accepted Answers:
$n + m$

6) Given an array of n elements drawn from a linearly ordered set, and an   **1 point**
integer $k \ (1 \leq k \leq n)$, the k-th smallest element in the array can be found in $O(f(n))$ time. In
the above sentence, which of the following forms the MOST APPROPRIATE choice for $f(n)$?

○

k

○

n

○

$k \log n$

○

$n \log k$

No, the answer is incorrect.

Score: 0

Accepted Answers:
n

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