18CS42 - Module 1

Super Important

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Q1. What is an algorithm? What are the properties of an algorithm? Explain with an example.

Q2. Explain asymptotic notations with examples.

Q3. Explain the general plan for analyzing the efficiency of a recursive / non-recursive algorithm.

Q4. If $t_1(n) \in O(g_1(n))$ and $t_2(n) \in O(g_2(n))$ prove that $t_1(n) + t_2(n) \in O(\max\{g_1(n), g_2(n)\})$.

Q5. Write an algorithm to find maximum element in an array of n element.

Q6. Design an algorithm for checking whether all elements in a given array are distinct or not. Derive its worst complexity.

Q7. Illustrate mathematical analysis of recursive code for tower of hanoi.

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