Guideline for Pre-Employment Advanced Level Test

1. Learn how to work with Visual Studio for "c" and "cpp" coding, and Eclipse for coding with Java.
2. Practice solving problems with only <stdio.h> and <iostream> headers, while implementing required algorithms yourself.
3. Practice solving problems with brute force as optimization is usually not required in this level of the exam, and given memory is plenty (usually 256MB to 1GB).
4. Some important topics to practice are:
    a. Recursion (Brute Force):
        i. Permutation: O(n!) solution to problems.
        ii. Combination: $O({}^nC_r)$ solution to problems.
        iii. Subset: $O(2^n)$ solution to problems.
        iv. Simulation: Variable time complexity.
            1. Board game simulation
            2. Job scheduling simulation
            3. Rotating/Reflecting/Copying 2D Array simulation
    b. Graphs:
        i. Graphs represented with 2D Array
        ii. DFS
        iii. BFS: Queue implementation might be required.
    c. Basic algorithms:
        i. $O(n^2)$ array sorting.
        ii. Queue/Stack data structures.
        iii. Successive sums
        iv. Any algorithms you can find which are not hard to implement or do not require any concept.
5. Some websites to practice problems are:
    a. www.codeforces.com
    b. www.hackerrank.com
    c. www.lightoj.com
    d. www.a2oj.com (A,B and C Ladders)