

Name:

CSU ID:

True or False Practice for Computational Complexity

- (1) P, NP, NP-Complete are used to classify decision problems in term of time complexity. T
- (2) The algorithm for a decision problem is equivalent to a deterministic Turing machine that accepts all Yes-instances and rejects all No-instances of the problem. T
- (3) P is the subset of decision problems that can be solved in polynomial time. T
- (4) NP is the subset of decision problems that can be solved in exponential time. F
- (5) Given any problem in the set of NP, a polynomial-time algorithm can be obtained to verify the answer guesses for its instances. T
- (6) Is the graph 3-coloring problem is a NP problem. T
- (7) If the graph 3-coloring problem can be solved in the polynomial time on a deterministic Turing machine, then $P=NP$. T