

CS 401

Sample questions on “NP-completeness topics” for Final Exam

Problem 1. Write down precisely one NP-complete problem, specifying its name, input, and the decision question.

Solution:

Name: Hamiltonian Cycle problem.

Input: undirected unweighted graph $G=(V,E)$.

Decision Question: Is there a cycle in G that visits every vertex exactly once?

Problem 2. True or False: $P \subseteq NP$

Solution: True.