The Theory of Computation

Bernard M.E. Moret

Addison-Wesley-Longman, 1998

Solution Manual
Chapter 7, Additional Problem 18

Actually, this problem is just a generalization of *X3C*, so we can prove it to be NP-complete by direct restriction. A direct reduction from *3SAT* builds one schedule for each literal ($2n$ in all), with bit entries for presence in clause and correspondence to a variable, using a requirement of all 1s—plus padding as needed.