The Theory of Computation
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Solution Manual
Chapter 2, Problem 2.10

The requirement on a minimum test set is to separate every pair of classes that is separated by the full collection of tests. If we replace "separate" by "cover," we have the solution to our questions! All we need to do is to set up the set S of all pairs separated by the full collection of tests (S is at most quadratic in the number of classes), then, for each test, couch it as a subset of pairs—all the pairs that this test separates by itself. Finding a minimum test set is then the same problem as finding a minimum cover for S.