

## ITEM ANALYSIS

The 2004 exam for Staff Analyst was a return to the very difficult Staff Analyst exams of the 1970's and 1980's. The 2004 exam was perceived by many candidates to be difficult. Most test takers, as they exited the exam, said so very emphatically.

A very small number of test takers disagreed and felt the exam had been pretty reasonable. Meanwhile, the fact that most candidates were exhausted on completion of this test caused the union representatives to believe that the exam, in fact, had been tough. The "item analysis" of the answer keys mailed in to the union enables us to conclude, with the majority, that it was, objectively, a challenging exam.

The definition of a hard exam, for most of us, is one where we are not sure of the correct answers to most questions.

There actually are "easy" competitive civil service exams. For example, it would be the job of the Department of Personnel to design an easy exam whenever the City had a great need to fill many jobs in a particular title. The Analyst title series, however, is a popular one and Personnel's task was to create a highly competitive test since there was no shortage of candidates.

A tough exam, however, does not guarantee a high rate of failure. It is the task of the Personnel branch of D.C.A.S. to generate a list sufficient to meet the City's needs for up to four years of the life of the list. For that reason, candidates who felt crushed upon leaving the exam may find some hope in the item analysis results. Most candidates were not sure of the correct answer to most of the questions being asked.

**Methodology.** The union handed out thousands of pencil cases at the various test sites. Along with pencils, calculator and candy, was a return envelope and a request for candidates to send in copies of their answer sheets. By Monday morning, June 28, 2004, over four hundred returns had arrived, been separated into AM exam, PM exam and Sunday exam and the data key punched into our computers.

Enclosed you will find the results of our effort for AM, PM and Sunday exams. The results are probably statistically reliable for the AM and PM exams. The sample is probably too small for the Sunday exam, but we are sending out what we did receive.

All three sessions used the same exam although questions were rearranged in order for each session. All three exams (for Staff Analyst, Education Analyst and Assistant Transit Management Analyst) were the same. If a candidate filed for two or more exams, a copy of the answer sheet was made for each of the additional exams.

**Findings.** In the entire exam, there were only four questions out of eighty asked where nine out of ten candidates picked the same answer. In ten to a dozen questions, eighty percent of the candidates agreed on the answer.

Finally, another eighteen questions found seventy percent of the candidates choosing the same answer.

There is no guarantee that the most popular answer is the correct answer. Still unless the question is itself invalid or flawed, if nine out of ten choose the answer, it's probably the right answer.

When, as happened on this exam, only about more than thirty questions have a “most popular” answer chosen by seventy percent of the candidates, and, at the other extreme, a score of questions have answers chosen by less than half of all those taking the test, it is a hard test.

In marking your own paper against the group results, you are probably safe to assume you are in good shape on every question when you are in agreement with seven out of ten candidates. That, in this case, only involves thirty or so questions. If, however, you chose a different answer from the majority choice in twenty out of those thirty questions, you probably should be planning to attend the test review session.

**Test Review and Protest.** By now you will or will not have requested the right to review the test questions. On the reverse side of the sheet you were issued at the exam to copy your answers, you were given a week to request to be called in to review the test questions. If you did not make that request, well...now you know better for next time.

If you did make that request, you will probably be called in to review the exam shortly after the “tentative key” of correct answers is issued.

The tentative answer keys will be posted on July 26<sup>th</sup> on [www.nyc.gov/html/dcas/html/examkeys.html](http://www.nyc.gov/html/dcas/html/examkeys.html) and probably presented in *The Chief* the day after. OSA at [www.osaunion.org](http://www.osaunion.org) will also post the keys as well as an updated item analysis.

When you go to the review session, take your answer sheet, the item analysis and the tentative answer key. The protests will be read by the test validation board which will produce the final answer key after examining protests.

**Questions to be “test reviewed”.** The only questions you want to review, normally, are those that, according to the tentative answer key, you got wrong. When you do review the exam, seek out especially those questions that you got wrong in concert with many others.

Note, for example, question 26 in the AM exam or number 10 on the PM session. You can find many other examples worthy of checking based on the results of the analysis. Good Luck on the protest.

Even if you do not end up protesting, reading the exam over, after the exam, and in light of the “correct” answers can be instructive for the next time you take an exam.