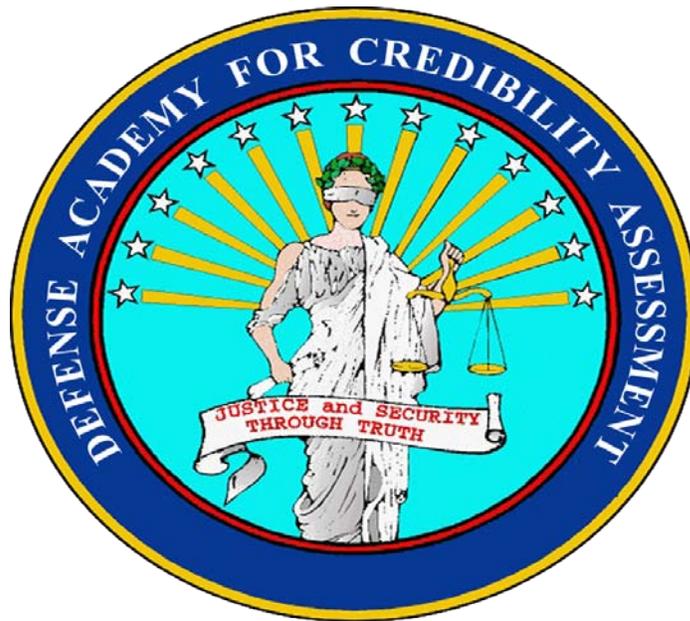


# DEFENSE ACADEMY FOR CREDIBILITY ASSESSMENT

## Psychophysiological Detection of Deception 505



## AIR FORCE MODIFIED GENERAL QUESTION TECHNIQUE (AFMGQT)

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Supersedes all previous editions

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## Table of Contents

1.	History	4
2.	Principles of the Air Force Modified General Question Technique (AFMGQT)	4
3.	Psychology of the AFMGQT	5
4.	AFMGQT Concepts	5
5.	AFMGQT Structure and Operations	6
6.	AFMGQT Question Types	8
7.	Formulating Comparison Questions for the AFMGQT	10
8.	Formulating Relevant Questions for the AFMGQT	11
9.	AFMGQT Test Data Analysis	11
10.	References	12

## 1. History

1.1. The Air Force Modified General Question Technique (AFMGQT) is a modified version of the Reid technique developed by John Reid before 1953. In 1966, the U.S. Army adopted the Reid technique and taught it at the polygraph course of the United States Army Military Police School (USAMPS), Fort Gordon, GA.

1.2. In 1968, USAMPS modified Reid's technique and called it the Army MGQT. Incorporated in the Army MGQT were many of the principles utilized in Cleve Backster's Zone Comparison Technique (ZCT, 1960) that was adopted by USAMPS in 1961.

1.3. One major difference between the Reid technique and the 1968 Army MGQT was that Reid did not use numerical evaluation. In addition, comparison questions were not isolated by time or place from the relevant issue and Reid allowed for multiple-issue testing within a single series (crossing targets).

1.4. In later years, both the Air Force and the Navy modified the Army MGQT in various ways and still utilize these testing techniques today. In the mid 1970s, the Air Force modified the Army MGQT by adding a sacrifice relevant, adding more comparison questions and allowing for a two, three or four relevant question test. The modified Air Force version was called the AFMGQT.

## 2. Principles of the AFMGQT

2.1. Comparison Question Technique. Like the Army MGQT, the AFMGQT is a comparison question technique. Depending on the version of the AFMGQT utilized, every relevant question has an adjacent comparison question for evaluation purposes. Except for Version 1 (see paragraphs 5.1.2 and 5.1.3 below) of the three and four relevant question AFMGQT, every relevant question is bracketed by a comparison question for evaluation purposes.

2.2. Test Uniformity. The AFMGQT is a version of the comparison question technique, and its structure is always uniform.

2.3. The AFMGQT allows for minimum and maximum number of relevant questions involving the selected target. As indicated above, the AFMGQT has two, three and four relevant question versions. Depending on available case facts and personal preference, the psychophysiological detection of deception (PDD) examiner may utilize any of these versions in resolving specific issue crimes, assuming that all relevant issues are resolved by the chosen version, i.e., two, three or four relevant question AFMGQT.

### 3. Psychology of the AFMGQT

3.1. As with all comparison question techniques, test questions in the AFMGQT are designed to pose a threat to the examinee, regardless of his or her innocence or guilt, and draw attention toward specific questions in the test structure.

3.2. In the AFMGQT, all test questions are reviewed with the examinee; however, the exact sequence in which the questions are asked in the data collection phase is not revealed.

3.3. The relevant questions in the AFMGQT structure are designed to pose a threat to the deceptive examinee.

3.4. The comparison questions in the AFMGQT structure are designed to pose a threat to the non-deceptive examinee.

### 4. AFMGQT Concepts

4.1. Psychological Set. The magnitude of physiological responses is a function of the relative salience of the test questions to the examinee. Differences in salience underlie the differential arousal to relevant and comparison questions for deceptive and truthful examinees, and for varying degrees of arousal to individual relevant questions to which the examinee is deceptive. The deceptive examinee may direct attention to the relevant question(s) that cause the greatest degree of concern. Sometimes, this examinee may not respond as greatly to other relevant question(s) on the test. Likewise, the truthful examinee may attend to the comparison question(s) that evokes the greatest concern. This explains why an examinee may respond significantly more to some, but not all, relevant or comparison questions that are presented during PDD examinations.

4.2. Spot Analysis. This concept refers to the procedure wherein each component tracing is separately evaluated by comparing the response of a relevant question to the response of a comparison question. Relevant questions are paired with a specific comparison question(s) for analysis. The relevant and comparison question-pair is a test data analysis (TDA) spot. Since the AFMGQT has two, three and four relevant question testing formats, the spots are the relevant questions that are compared to adjacent comparison questions (See paragraph 9).

4.3. Numerical Analysis. A system by which a set of numerical values are assigned to differences in response magnitude between pre-established pairings of relevant and comparison questions. The two systems most used in the Federal Government are the:

4.3.1. Seven-Position Scale: **+1 +2 +3 0 -1 -2 -3**

4.3.2. Three-Position Scale: **+1 0 -1**

4.3.3 Typically, the AFMGQT is evaluated using the seven-position numerical analysis scale.

5. AFMGQT Structure and Operations. There are two authorized versions of the AFMGQT. It is the examiner's discretion as to which is chosen in specific-issue testing.

5.1. Version 1 is the original AFMGQT format that was modified from the Army MQGT in the mid 1970s. Version 1 of the AFMGQT has a two, three and four relevant question version as follows:

5.1.1. Version 1, Two Relevant Question Test:

1. Irrelevant
2. Sacrifice Relevant
3. Comparison
4. Secondary Relevant (Usually help, plan, participate, guilty knowledge or Evidence connecting)
5. Comparison (Most encompassing)
6. Primary Relevant (Always primary relevant position)
7. Comparison

5.1.2. Version 1, Three Relevant Question Test:

1. Irrelevant
2. Sacrifice Relevant
3. Comparison
4. Secondary Relevant (Usually help, plan, participate or evidence connecting)
5. Comparison (Most encompassing)
6. Primary Relevant (Always primary relevant position)
7. Comparison
8. Secondary Relevant (Guilty knowledge or evidence connecting)

5.1.3. Version 1, Four Relevant Question Test:

1. Irrelevant
2. Sacrifice Relevant
3. Comparison
4. Secondary Relevant (Usually help, plan, participate or evidence connecting)
5. Comparison (Most encompassing)
6. Primary Relevant (Always primary relevant position)
7. Comparison
8. Secondary Relevant (Typically evidence connecting)
9. Comparison
10. Secondary Relevant (Usually guilty knowledge or evidence connecting)

5.2. Version 2 is a modified version of the original AFMGQT. It was devised as an authorized testing format for counterintelligence security polygraph examinations. It was subsequently utilized in informant testing. It is now an authorized testing format for specific-issue polygraph examinations. The primary difference between versions 1 and 2 is that each relevant question in Version 2 is always bracketed by a comparison question either of which may be used in the evaluation process.

5.2.1. Version 2, Two Relevant Question Test

1. Irrelevant
2. Sacrifice Relevant
3. Comparison
4. Secondary Relevant (Usually help, plan, participate, guilty knowledge or evidence connecting)
5. Primary Relevant (Always primary relevant position)
6. Comparison (Most encompassing comparison)

5.2.2. Version 2, Three Relevant Question Test

1. Irrelevant
2. Sacrifice Relevant
3. Comparison
4. Secondary Relevant (Usually help, plan, participate or evidence connecting)
5. Primary Relevant
6. Comparison (Most encompassing)
7. Secondary Relevant (Usually guilty knowledge or evidence connecting)
8. Comparison

5.2.3. Version 2, Four Relevant Question AFMGQT:

1. Irrelevant
2. Sacrifice Relevant
3. Comparison
4. Secondary Relevant (Usually help, plan, participate or evidence connecting)
5. Primary Relevant
6. Comparison (Most encompassing)
7. Secondary Relevant (Usually evidence connecting)
8. Secondary Relevant (Usually guilty knowledge or evidence connecting)
9. Comparison

5.3. There are always three AFMGQT charts collected. The first AFMGQT chart is collected in straight sequence. The sequence for the questions on the second chart is always changed. At the examiner's discretion, the order of the questions on the third chart may also be changed. As long as the relevant questions are bracketed by comparison questions according to the format, examiners have the option of sequencing the comparison and relevant questions in any manner they choose for charts 2 and 3 for either version of the AFMGQT. For Version 2, when using the

three relevant question format, examiners may sequence the relevant questions in a one-two or two-one relevant question sequence in the mixed chart(s). For instance, chart 2 might be sequenced IR, SR, C, R, C, R, R, C and chart 3 may be sequenced IR, SR, C, R, R, C, R, C or vice versa.

5.4. An acquaintance test is always collected as the first chart with the AFMGQT.

5.5. Centering adjustments may be made at appropriate times between any questions. Sensitivity and cardiovascular pressure changes can only be made before the third question is asked on the AFMGQT (first comparison question).

5.6. During the data collection phase, irrelevant questions may be inserted for homeostasis purposes as needed. Additionally, although each version of the AFMGQT has just one specified irrelevant question in the format, examiners may review as many as three irrelevant questions in the pretest interview. By doing this, each chart could begin with a different irrelevant question or the examiner would have additional irrelevant questions to insert for homeostasis purposes. However, this procedure is optional.

## 6. AFMGQT Question Types

6.1. Relevant questions – The following types of relevant questions are used with the AFMGQT.

6.1.1. Sacrifice Relevant Question. The sacrifice relevant question is the first question that refers to the relevant issue. The purpose of the sacrifice relevant question is to absorb initial response (orienting response) to the relevant issue. The sacrifice relevant question is not numerically evaluated and it is worded to elicit a “Yes” answer.

EXAMPLES: Regarding the shooting of that man, do you intend to answer each question truthfully?

Regarding the theft of that money, do you intend to answer each question truthfully?

6.1.2. Primary Relevant Question. This question tests direct involvement. In Version 1 of the AFMGQT, it is always the #6 relevant questions. In Version 2 of the AFMGQT, it is always the #5 relevant questions. In a specific issue examination, there is only one primary relevant question in each AFMGQT series.

EXAMPLES: Did you shoot that man?  
Did you steal any of that money?

6.1.3. Secondary Relevant Question(s). These questions test lesser actions of the issue than direct involvement. They include such areas as secondary involvement (help, plan or participate), guilty knowledge (seeing, hearing, knowing), and evidence connecting.

6.1.3.1. Secondary Involvement. In multiple suspect investigations, the #4 relevant question of the AFMGQT normally addresses secondary involvement areas such as help, plan or participate.

EXAMPLES: Did you help anyone steal any of that money?  
Did you plan with anyone to shoot that man?  
Did you participate (in any way) in stabbing that man?

6.1.3.2. Evidence Connecting. This question is designed to determine if the examinee is aware of the nature or location of various items of evidence and/or physical acts that support the primary issue. The evidence connecting question is most often used at the #8 position of Version 1, and #7 position of Version 2 of the AFMGQT. In some circumstances secondary involvement or guilty knowledge is not a concern, but if investigative information is available, additional “evidence connecting” questions may be used at all secondary relevant question positions of the AFMGQT.

EXAMPLES: Do you know where any of that stolen money is now?  
Do you know the caliber of the weapon used to shoot that man?  
Did you tear any of that woman’s clothing?  
Did you cut the lock off of that door?  
Did you throw a brick through that window?

6.1.3.3. Guilty Knowledge. A secondary element question used to determine if the examinee has any knowledge of who committed the crime under investigation, such as seeing, hearing or knowing. If used, this question is usually the last relevant question presented in the AFMGQT.

EXAMPLES: Did you see who shot that man?  
Has anyone told you that they.....?  
Do you know for sure who shot that man?  
Do you know who stole any of that money?

6.2. Comparison Questions. In Version 1 of the AFMGQT, comparison questions are always in the #3, #5, #7 and #9 positions (depending on two, three or four relevant question format). In the four relevant question of Version 2, the comparison questions are always in the #3, #6 and #9 positions.

6.2.1. Comparison questions are used to compare against the relevant questions.

6.2.2. They are designed for the truthful examinee who should be more concerned (physiologically aroused) about comparison than relevant questions.

6.3. Irrelevant Questions. There is one designated position for an irrelevant question in the AFMGQT; however, irrelevant questions may be inserted at any time for homeostasis purposes. Typically, the examiner will review three irrelevant questions in the pretest interview to insert for homeostasis purposes or to begin each chart with a different irrelevant question. Irrelevant questions:

6.3.1. Are neutral questions.

6.3.2. Are unrelated to the relevant issue.

6.3.3. Are designed to absorb initial response to first test questions on the chart (absorb orienting response.)

6.3.4. Are worded so examinee answers "Yes".

6.3.5. Help to overcome artifacts, are inserted for homeostasis purposes and are used to establish a physiological tracing free of noise.

EXAMPLES: Are the lights on in this room?  
Are you now sitting down?  
Is today \_\_\_\_\_?

## 7. Formulating Comparison Questions for the AFMGQT.

7.1. Probable lie

7.2. Typically use action verbs that are the same or similar

7.2.1. Steal Relevant > Steal Comparison

7.2.2. Shoot Relevant > Hurt/Harm/Injure Comparison

7.3. Comparison questions are isolated from relevant questions by time, place or category.

7.3.1. TIME: Prior to this year, did you ever steal anything?

7.3.2. PLACE: Prior to arriving in South Carolina, did you ever steal anything?

7.3.3 CATEGORY: Did you ever steal any Government Property? (If issue is theft of private property)

7.3.4. Are broad in time and scope.

7.3.5. Admissions to comparison questions require modification of the question, i.e., "Other than what you told me, before this year, did you ever steal anything?"

## 8. Formulating Relevant Questions for the AFMGQT

8.1. Must be clear and concise.

8.2. Avoid emotional/legal terms. (i.e., Murder, Rape, Kill).

8.3. Must present a dichotomy - require a "Yes" or "No" answer.

8.4. Should not be worded in the form of an accusation or contain an inference which presupposes knowledge or guilt.

8.5. When testing for multiple items or amounts of money - always use the phrase "Any of".

## 9. AFMGQT Test Data Analysis.

9.1. In Versions 1 and 2 of the AFMGQT, if a relevant question is bracketed by a comparison question, either comparison question may be evaluated against the relevant question by individual physiological tracings. In the three and four relevant question tests for Version 1 of the AFMGQT, since the last relevant question (#8 or #10) is not bracketed by a comparison question, it is scored against the preceding comparison question only.

9.2. Decision rules for the MGQT use the vertical spot totals only. There is NO overall grand total as used in the ZCT.

9.2.1. NDI: Each overall vertical spot total must be a plus three (+3) or greater.

9.2.2. DI: At least one overall spot total must be minus three (-3) or lower (-4, -5, etc.).

9.2.3. Anything else is No Opinion.

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