

# POLYGRAPH GUIDE FOR STANDARDS AND PRACTICES (GUIDE)



## POLYGRAPH LAW ENFORCEMENT ACCREDITATION (PLEA)

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## C1. CHAPTER 1

### INTRODUCTION

#### C1.1. CONCEPT FOR USE OF POLYGRAPH BY THE LAW ENFORCEMENT ACCREDITATION PROGRAM (PLEA)

The polygraph discipline has become accepted a valuable forensic application within the law enforcement (LE) and intelligence communities (IC). As with any professional forensic discipline, established standardized methodologies should be implemented to ensure proper application. The polygraph procedures in this Guide detail those standards adopted by the LE agencies that have elected to participate in the PLEA program. Participating agencies recognize that the procedures in this Guide will help ensure each examination will be conducted in the most professional manner possible while maintaining the polygraph discipline as an effective investigative tool.

#### C1.2. SCOPE

Nothing in this Guide or referenced materials should be construed to limit the authority of individual agency heads to manage their polygraph programs in the manner best suited to their individual LE missions. Failure to abide by any or all parts of this Guide shall not give rise to any claim cognizable in a court of law. This Guide is intended only to improve the internal management of LE polygraph programs. It is not intended and does not create any right to administrative or judicial review or any other right, benefit, trust, responsibility, substantive or procedural, enforceable by a party against any LE jurisdiction, its officers or employees, or any other person.

C1.2.1. In the event of conflict regarding this Guide and state law or local regulations or restrictions, state and local guidance should prevail.

C1.2.2. Where applicable, a polygraph examiner should be licensed or appropriately certified by the LE agency for the jurisdiction in which the examiner conducts polygraph examinations.

#### C1.3. POLICIES AND PROCEDURES FOR THE CONDUCT OF EXAMINATIONS

C1.3.1. Managers participating in the PLEA oversight process have agreed to establish procedures for the supervision of polygraph programs consistent with this Guide to ensure the highest ethical, professional, and technical standards.

C1.3.2. General principles and specific standards for polygraph examinations are contained in this Guide and have been adopted by each participating agency.

C1.3.3. Polygraph policies and procedures should address the following:

C1.3.3.1. Persons authorized to approve the conduct of polygraph examinations within the agency.

C1.3.3.2. Procedures for the types of examinations, formats and techniques authorized to be conducted by the agency.

C1.3.3.3. Procedures for the supervision, certification, and decertification of a polygraph examiner.

C1.3.3.4. Quality control procedures.

C1.3.4. Requests to modify this Guide should be made in accordance with the by-laws of the PLEA.

## C2. CHAPTER 2

### POLYGRAPH EXAMINATIONS

C2.1. INVESTIGATOR RESPONSIBILITIES. The case agent or investigator should employ the following best practices when polygraph is used in criminal specific investigations :

C2.1.1. Employ polygraph examinations as a selective tool.

C2.1.1.1. Conduct an in-depth interview with the prospective examinee regarding his/her knowledge of the facts surrounding the issue being investigated.

C2.1.1.2. Discuss with the examiner the investigation, the information desired from the examinee, and polygraph procedures.

C2.1.1.3. Complete investigative efforts and gather background information determined appropriate by the investigator and the examiner.

C2. 1.1.4. Be available to the examiner during the conduct of the examination for consultation and assistance.

C2.1.1.5. Ensure the examinee has NOT been extensively interrogated immediately prior to the polygraph examination.

C2.1.1.6. Request a third party witness the signing of the statement of rights and consent when possible.

C2.1.1.7. Upon completion of the polygraph examination when a confession or admission is provided, attempt to obtain a written statement from the examinee.

### C2.2. AUTHORIZATION FOR USE OF A POLYGRAPH EXAMINATION

C2.2.1. Polygraph examinations may be authorized when consistent with applicable laws, administrative regulations, and agency policy. Situations in which authorization may be requested and approved may include, but are not be limited to, the following:

C2.2.1.1. In support of a criminal investigation.

C2.2.1.2. To confirm or refute an allegation that cannot be verified or disproved by other evidence (alleged victims when allowed by law).

C2.2.1.3. A request from the office of the prosecutor.

C2.2.1.4. As part of an administrative or internal investigation consistent with agency policy.

C2.2.1.5. An element of an initial employment background investigation for a position designated by public law or agency policy.

C2.2.1.6. To resolve derogatory information obtained during a background Investigation.

### C2.3. POLYGRAPH APPROVAL PROCEDURES

C2.3.1. Approval Authority. Each agency will identify those persons authorized to approve the conduct of a polygraph examination. All polygraph examinations should be approved prior to being conducted.

C2.3.2. Accounting Procedures. An accounting procedure for the approval, conduct and maintenance of polygraph examinations should be established.

### C2.4. PRE-TEST PROCEDURES

C2.4.1. The examinee will be informed of his/her rights using a rights and/or consent form consistent with agency policy. The consent of the examinee will be obtained after an initial brief explanation of the polygraph process. This introduction normally includes the purpose of the test, the duration, and the issues to be addressed during the examination.

C2.4.2. Through a brief series of background and/or general health/well-being questions, the examiner should establish rapport with the examinee and assess the examinee's suitability for testing.

C2.4.2.1. The assessment of the examinee's suitability should include physical, mental, and emotional fitness.

C2.4.2.2. When the examiner determines the examinee is not suitable for testing, no examination will be conducted. The examiner will fully document his/her reasoning for making a "not suitable for testing" determination.

C2.4.3. The examiner should provide an explanation to the examinee regarding polygraph procedures. This explanation will include instrumentation, component placement, and a brief discussion of the physiological responses that are being monitored and recorded.

C2.4.4. A comprehensive discussion of the details of the investigation or application shall be completed. The examinee shall be allowed to fully explain his/her position on the issue being tested.

C2.4.5. All questions to be asked during the examination shall be fully reviewed with the examinee to ensure the examinee recognizes and understands each question. Questions should be reviewed in the following order:

Sacrifice Relevant Question  
Relevant Questions  
Comparison Questions  
Irrelevant Questions  
Symptomatic Questions (when appropriate)

## C2.5. DATA COLLECTION PROCEDURES

C2.5.1. Test data tracings, notations, question spacing, and labeling will be consistent with APA and NCCA standards.

C2.5.2. An acquaintance test will be conducted using the "known solution" test format consistent with Chapter 6 of this Guide.

C2.5.3. Following the acquaintance test, a series of at least three presentations of each relevant question (question string/charts) is collected.

C2.5.4. Each question string used during a series should contain all relevant and comparison questions reviewed during the pretest phase of the examination.

C2.5.5. No more than five question strings/charts capable of being evaluated should be asked in a single series.

C2.5.6. The examiner will ensure test data and related documentation is forwarded for a quality control review.

C2.5.7. Questions shall be asked so responses are not influenced by the manner (voice inflection) in which the question is presented.

C2.5.8. A criminal specific issue series should address a single-issue. Different facets of an issue may be addressed in one series consistent with the Air Force Modified General Question Test (AFMGQT) Chapter 9 or the Zone Comparison Test (ZCT) Chapter 7 of this Guide. If more than one issue is to be addressed, which would require additional primary relevant questions, a second separate series will be conducted for each issue.

C2.5.9. No more than four series should be conducted during a single day of testing. If additional series are required, additional testing should be scheduled at a later date.

C2.5.10. An agency should not routinely require/allow an examiner to conduct more than three polygraph examinations per day.

C2.5.11. Conditions under which testing occurs should be free from distractions that would interfere with the ability of the examinee to appropriately focus during the examination process.

## C2.6. TEST DATA ANALYSIS (TDA)

C2.6.1. Evaluation procedures, TDA criteria, and opinions based on analysis of polygraph test data will be completed in accordance with Chapter 5 of this Guide.

C2.6.2. Upon completion of TDA for a series, an examiner must provide a conclusion regarding that series. The optimum result is a conclusive opinion, such as, no deception indicated (NDI), no significant response (NSR), deception indicated (DI), or significant response (SR). When a conclusive opinion cannot be provided based upon the physiological data collected, the examiner must use his/her judgment to continue testing, reschedule for additional testing, or attempt to resolve issues through interview or interrogation.

## C2.7. POST TEST PROCEDURES

C2.7.1. Following an evaluation of test data resulting in a no opinion or deceptive outcome, the examinee will be interviewed/interrogated in an attempt to clarify the issues of concern for that examination.

C2.7.2. Additional testing may be conducted as necessary.

C2.7.3. Admissions/confessions should be documented.

C2.7.4. The post test phase shall be terminated if the examinee exercises his/her right to legal counsel or terminates the interview. The circumstances of the termination should be documented.

C2.7.5. During the post test interview when non deceptive results occur, the examinee and case agent should be notified that all test data will be reviewed by quality control, and re-testing may be necessary.

## C2.8. MONITORING REQUIREMENTS

C2.8.1. Except during the rights advisement and/or completion of the consent form, where applicable, no one other than the examinee and examiner should be present in the examination room. Exceptions to this provision (interpreter, parent or legal guardian, etc.,) will be at the sole discretion of the examiner.

## C2.9. POLYGRAPH INSTRUMENTS

C2.9.1. Examiners shall use a polygraph instrument that is properly functioning and maintained in accordance with manufacturer's specifications. Examiners using analog instruments shall calibrate the instrument in accordance with the manufacturer's recommendations.

C2.9.2. At a minimum, a polygraph instrument will continuously record the following components:

C2.9.2.1. Two pneumograph components to document thoracic and abdominal movement patterns associated with respiration.

C2.9.2.2. A component to record electrodermal activity reflecting relative changes in the conductance or resistance of current by epidermal tissue.

C2.9.2.3. A cardiograph component capable of recording pulse rate, pulse amplitude and blood volume changes.

C2.9.3. A motion sensor should routinely be used in accordance with Chapter 11 of this Guide.

C2.9.4. Additional types of physiological data may be recorded during testing but may not be used to aid in formulating decisions of truthfulness or deception unless the process or technology has been validated and replicated in published research.

## C2.10. RECORDING EXAMINATIONS (Audio/Video).

C2.10.1. Polygraph examinations will be recorded in accordance with agency policy.

C2.10.2. An examinee will be made aware of an examination that is being recorded in accordance with agency policy and consistent with public law.

## C2.11. REPORTS AND DOCUMENTS

C2.11.1. A polygraph examination file will be prepared for each examination and the file shall contain the following:

- C2.11.1.1. Name of each examinee and/or case file number.
  - C2.11.1.2. Date and location of each examination.
  - C2.11.1.3. Time each examination started and concluded.
  - C2.11.1.4. Identifying information of the instrument used.
  - C2.11.1.5. Copies of applicable written consents, waivers, and releases.
  - C2.11.1.6. A list of test questions asked during the data collection phase.
  - C2.11.1.7. Sufficient information to identify the issue for which the examination was conducted.
  - C2.11.1.8. The results of each series.
  - C2.11.1.9. Identity of the examiner.
  - C2.11.1.10. Name and organization of the QC reviewer(s).
  - C2.11.1.11. Pretest and/or post test admissions.
  - C2.11.1.12. Test data, notes and technical documents.
  - C2.11.1.13. Audio/visual recordings.
- C2.11.2. For reporting purposes, a polygraph examination is considered to have taken place if the pretest phase was initiated.
- C2.11.3. The completed polygraph examination file will be forwarded for a quality control review.
- C2.11.4. Polygraph reports and related documents will be maintained for a minimum of three years.
- C2.11.5. Except as provided by law, the release of polygraph test results should be as limited as possible.
- C2.11.6. All polygraph reports are considered preliminary until the quality control process is completed.

C2.11.7. Final reports will indicate that a quality control review was conducted, the identity of the person(s) conducting the quality control review, and the resulting opinion of the quality control review(s).

#### C2.12. USE OF INTERPRETERS

C2.12.1. Qualified interpreters should be employed when language barriers exist.

C2.12.2. All documents prepared in a foreign language should be translated into English and maintained with the original foreign language documents.

C2.13. AGENCY EXAMINERS. Only examiners designated by a participating LE agency or an intern examiner under the direction of a participating agency examiner should be authorized to administer polygraph examinations.

#### C2.14. PRE-EMPLOYMENT EXAMINATIONS

C2.14.1. Pre-employment polygraph examinations shall be administered only after they are authorized by an approving authority.

C2.14.2. Pre-employment polygraph examinations shall be conducted in accordance with Chapter 10 of this Guide.

C2.14.3. The examiner should review the relevant elements of the examinee's employment application prior to or during the pretest phase of the examination.

C2.14.4. Admissions relevant to the issue being tested should be documented in the polygraph examination report.

### C3. CHAPTER 3

#### QUALITY CONTROL

##### C3.1. SCOPE

This Guide establishes the essential elements for the quality control (QC) procedures employed by participating law enforcement (LE) agencies.

##### C3.2. BACKGROUND

In order to develop procedures for the conduct of an independent objective QC review for each examination conducted by participating LE agencies, these QC standards of practice were developed.

##### C3.3. ADMINISTRATION OF QC

C3.3.1. Each participating LE agency shall maintain a QC program or obtain a cooperative agreement to ensure technical standards are met.

C3.3.2. Polygraph QC should be under the supervision of the polygraph program unit chief or a senior examiner trained and experienced in the polygraph procedures used by the LE agency.

C3.3.3. QC procedures should only be accomplished by designated polygraph examiners who are experienced and trained in the polygraph procedures used by the LE agency.

C3.3.3.1. Personnel assigned QC responsibilities should have a minimum of two years experience as a polygraph examiner.

C3.3.3.2. QC procedures for LE agencies with fewer than three examiners should enter into a written agreement with another agency to ensure QC procedures are completed in accordance with this Guide.

##### C3.4. QC PROCEDURES

C3.4.1. Each agency should have written standard operating procedures for the conduct of QC.

C3.4.2. QC procedures should be independent and objective without undue influence of the original examiner or other sources.

C3.4.3. All polygraph examinations, to include reports, test data, and related technical documents shall undergo a QC review to ensure examiners used standard methodologies and procedures as adopted by the agency and this Guide. Agency documentation shall be sufficient to allow for subsequent reconstruction of each polygraph examination.

C3.4.4. QC shall have the authority to direct a reexamination by agency examiners.

C3.4.5. Agency policy should be established to ensure the results of an examination are not considered final until the examination has been subjected to the agency's QC review. Agency final opinion for each examination must be consistent with the QC opinion.

C3.4.6. Each polygraph examination file should indicate that a QC review of the examination has been completed.

## C4. CHAPTER 4

### TEST QUESTION CONSTRUCTION

#### C4.1. SCOPE

This Guide establishes the essential elements for test question construction procedures employed by participating law enforcement agencies.

#### C4.2. BACKGROUND

A test question is a specifically designed sentence posed to an examinee during the data collection or in- test phase of a polygraph examination. Test questions are designed to maximize differences in the elicited response patterns between truthful and deceptive examinees. Several types of test questions are used in polygraph testing.

#### C4.3. QUESTION TYPES

C4.3.1. Relevant Question. This question pertains directly to the matter under investigation or to the issue(s) for which the examinee is being tested. Primary and secondary questions are the two types of relevant questions used in most polygraph test formats. The following guidelines provide the process by which a relevant question should be constructed. Relevant questions should:

C4.3.1.1. Be clear and concise.

C4.3.1.2. Avoid legal terms when possible.

C4.3.1.3. Be constructed so that they may be answered yes or no.

C4.3.1.4. Not be worded in the form of an accusation or contain an inference that presupposes knowledge or guilt.

C4.3.1.5. In polygraph screening tests, all relevant questions are considered primary relevant questions.

C4.3.1.6. In specific issue tests, when testing for multiple items or amounts of money, use the phrase, "any of", e.g., "Did you steal any of that money?"

C4.3.1.7. In specific issue tests, only address one issue in each relevant question.

Figure C4.F1. Sample of a relevant question addressing a single issue.

Primary Relevant: Did you steal any of that money from John's house that night?

C4.3.1.8. In specific issue tests, address only one incident in a series.

C4.3.2. Primary Relevant Question. This question tests the possible direct involvement of the examinee.

Figure C4.F2. Samples of a Specific Issue Primary Relevant Question

Did you shoot that man that night?  
Did you force that woman to have sexual intercourse?  
Did you set that fire in that warehouse?

C4.3.3. Secondary Relevant Question. This question tests the examinee's possible involvement in the offense under investigation. There are three types of secondary relevant questions:

C4.3.3.1. Evidence-Connecting Question. An evidence-connecting question is designed to determine if the examinee was involved with any of the evidence of the crime or if he/she is aware of the nature or location of various items of evidence.

Figure C4.F3. Samples of an Evidence-Connecting Relevant Question

Do you know where any of that stolen money was disposed of?  
Did you tear that woman's dress?  
Were you inside the warehouse the night that fire started?

C4.3.3.2. Guilty-Knowledge Question. A guilty-knowledge relevant question is used to determine if the examinee has any knowledge of who committed the incident under investigation.

Figure C4.F4. Samples of Guilty-Knowledge Relevant Questions

Do you know who shot that man?  
Do you know who stole any of that money?

C4.3.3.3. Secondary-Involvement Question. A secondary-involvement relevant question tests for secondary involvement such as seeing or hearing or may focus on physical acts that support the primary offense.

Figure C4.F5. Samples of a Secondary-Involvement Relevant Question

Did you participate in the theft of any of that money?  
Did you plan with anyone to start that fire?

C4.3.4. Comparison Question. Physiological responses of comparison questions are compared to physiological responses of relevant questions. The comparison question is designed to produce a greater physiological response for the non-deceptive person.

C4.3.4.1. Probable-Lie Comparison (PLC) Question. This question is designed to be a probable-lie for the examinee. The PLC question should be similar in nature but unrelated by time, place or category to the specific issue. The comparison question should use the same or similar in nature action verb as the relevant issue. A comparison question should be broad in scope and time so that it captures as many of the examinee's past life experiences as possible.

Figure C4.F6. Samples of a Probable-Lie (Exclusionary Comparison Question)

Before 2007, did you ever steal anything?  
Prior to living in Texas, did you ever lie to a person in authority?

C4.3.5. Sacrifice Relevant Question. This is the first question that refers to the relevant issue, and it prepares the examinee for the introduction of the relevant questions. Sacrifice relevant questions are not evaluated during the test data analysis phase of a polygraph examination.

Figure C4.F7. Sample of a Sacrifice Relevant Question

Regarding the stealing of that car, do you intend to answer each question truthfully?

C4.3.6. Symptomatic Questions. Two symptomatic questions are used exclusively in Zone Comparison Tests; they are designed to test for an outside issue that could be more significant for an examinee than the relevant and comparison issues. Responses to the symptomatic questions are evaluated, though not numerically evaluated, during the test data analysis phase of a polygraph examination.

Figure C4.F8. Sample of the Symptomatic Questions

SYM #3 Do you believe I will only ask you the questions we reviewed?  
SYM #8/9 Is there something else you are afraid I will ask you a question about?

C4.3.7. Irrelevant Question. This question is the first question asked during the data collection phase. It may also be asked in other positions in the question string. It is designed to allow the orienting response to habituate before a question that is to be evaluated is asked, and it can be used to establish homeostasis when an artifact occurs during test data collection. Irrelevant questions should be neutral and unrelated to the issue being tested. Irrelevant questions are not numerically evaluated. Several irrelevant questions may be reviewed and used as needed.

Figure C4.F9. Samples of Irrelevant Questions

Are you now in Alabama?  
Are the lights on in this room?

## C5. CHAPTER 5

### TEST DATA ANALYSIS

#### C5.1. SCOPE

C5.1.1. This Guide establishes essential elements for test data analysis procedures employed by participating law enforcement agencies.

C5.1.2. The physiological recordings which comprise a polygraph examination are addressed in this standard. The respiratory, electrodermal, and cardiovascular components are currently the three accepted channels for collecting test data analysis during a polygraph examination.

#### C5.2. BACKGROUND

C5.2.1. The numerical evaluation procedures adopted in this Guide are consistent with the curriculum of the National Center for Credibility Assessment (NCCA).

#### C5.3. TEST DATA ANALYSIS

C5.3.1. Evaluation Procedures. The two methods used to analyze polygraph test data adopted by PLEA are the 3- and 7-position numerical evaluation procedures. In the 3- and 7-position evaluation systems, numerical values are assigned to the test data. Relative weights are provided for evaluative criteria in the 7-position system. The evaluative criteria used in analyzing the data collected are standard for both the 3- and 7-position evaluation systems.

C5.3.2. Numerical Evaluation. The responses to the relevant questions are compared to the greatest responses at a recording channel of an adjacent comparison question. For the 3-position evaluation system, a plus (+) value is assigned when the physiological responses are greater to the comparison questions. A minus (-) value is assigned when the physiological responses are greater to the relevant questions. A value of zero (0) is assigned when the responses to the comparison and relevant questions have no apparent difference in magnitude. A value of zero with a line through it indicates a recording channel is unable to be evaluated due to an artifact or other excessive noise. For the 7-position evaluation system, numerical values ranging from plus three (+3) to minus three (-3) are assigned to the responses for each component when comparing designated comparison and relevant test questions in a question string.

Figure C5.F1. Values used in the 3-Position Evaluation System

+1, 0, -1
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Figure C5.F2. Values used in the 7-Position Evaluation system

+3, +2, +1, 0, -1, -2, -3
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C5.3.3. Evaluative Criteria. Only data that is timely with the applied stimulus (questions) and free of artifacts and noise on the signal of interest (tracings) can be evaluated. What is evaluated is the response or lack thereof when a question is asked by the examiner. The polygraph test data consists of the signal of interest (tracings) which may contain noise, artifact, recovery, or response. Not all test data is evaluated. When noise, an artifact, or recovery occurs at the time of an applied stimulus, the evaluation of that test data may not be achieved. In comparison question formats, physiological response can only be compared against physiological response. A question spacing of 15 to 25 seconds from onset of applied stimulus should be maintained throughout the examination. The tracing size of each parameter collected should allow an examiner and a QC reviewer to evaluate each tracing.

C5.3.4. Evaluation Criteria for Each Component.

C5.3.4.1. Physiological criteria consistent with the criteria taught at NCCA will be used to evaluate test data. An NCCA test data analysis pamphlet is available in the Reference Library on the Polygraph Information Network Internet portal.

C5.3.4.2. When comparing relevant and comparison questions, each component tracing is reviewed and compared independently.

C5.3.4.3. The greatest physiological response of the comparison question(s) is compared to the adjacent relevant question designated by the question format used.

C5.3.5. Test Data Analysis Opinions. The following opinions may be provided when sufficient test data is collected during a polygraph examination: deception indicated (DI), significant responses (SR), no deception indicated (NDI), no significant responses (NSR), no opinion (NO).

C5.3.5.1. Opinions of DI, NDI and NO are appropriate in a specific issue series.

C5.3.5.2. Opinions of NSR, SR and NO are appropriate in screening examinations.

C5.3.6. Administrative Opinions. These opinions reflect the results of a series or an examination that are not based upon physiological responses to the applied stimuli such as when the examinee terminates an examination or is practicing countermeasures. In such instances, administrative opinions such as inconclusive, no opinion, interrupt, etc., are appropriate.

## 6. CHAPTER 6

### ACQUAINTANCE TEST (ACQT)

#### C6.1. SCOPE

C6.1.1. This Guide establishes essential elements for conduct of the ACQT for participating law enforcement (LE) agencies.

#### C6.2. BACKGROUND

C6.2.1. The ACQT, as taught by the National Center for Credibility Assessment (NCCA), is a form of the known solution Peak of Tension (POT) test and is used to demonstrate the basic concepts of polygraph to an examinee. The primary purpose of the ACQT is to assure the examinee that the polygraph process is effective for that individual. The ACQT should also reinforce the concept of psychological set, which is, identifying those questions that have the greatest salience to the examinee.

C6.2.2. The ACQT is referred to as an acquaintance test since it is administered in part to acquaint the examinee with polygraph procedures. A known solution ACQT is the ACQT adopted by this Guide.

#### C6.3. PRETEST PHASE

C6.3.1. During the pretest phase, the fact that an ACQT will be conducted is mentioned. ACQT questions are reviewed prior to the test being conducted.

##### C6.3.2. Questions Used in the ACQT

C6.3.2.1. The Key. This represents the number chosen by the examinee. The Key should not be in the middle or center position of the question string.

C6.3.2.2. Padding Questions. These questions are placed before and after the key number and consist of questions relating to the other numbers on the test. Normally, 5 padding questions are reviewed and asked.

C6.3.2.3. Preparatory Phrase. This is the first part of the first question of the ACQT, and it is used to focus the examinee's attention to the issue which is being tested.

Figure C6.F1. Sample of a Preparatory Phrase

Regarding the number you wrote ....

C6.3.2.4. Prefix Phrase. This is the prefix to each of the questions.

Figure C6.F2. Sample of a Prefix Phrase

Was it number.....
--------------------

#### C6.4. DATA COLLECTION

##### C6.4.1. Question String.

Figure C6.F3. Sample of an Acquaintance Test Question

Preparatory phrase	Regarding the number you wrote,
Prefix	was it number
Padding	4?
Padding	5?
Padding	6?
Key	7?
Padding	8?
Padding	9?

C6.4.2. Format Procedures. The ACQT is conducted in a mini-polygraph examination format. It consists of a pretest interview, data collection phase, data analysis phase, and post test interview. This process should reassure the non-deceptive examinee and stimulate the deceptive examinee.

C6.4.2.1. A visual stimulus is used in the ACQT to ensure the examinee knows the sequence of the examination and the location of the selected key.

C6.4.2.2. All questions are worded to elicit a no answer.

C6.5. TEST DATA ANALYSIS. The ACQT is not evaluated numerically. It is evaluated utilizing the test data analysis procedures for the POT as taught by NCCA.

## C7. CHAPTER 7

### ZONE COMPARISON TEST

#### C7.1. SCOPE

This Guide establishes the essential elements of the conduct of the Zone Comparison Test (ZCT) for participating law enforcement agencies.

#### C7.2. BACKGROUND

The ZCT was designed by Cleve Backster, and a variation of that format was subsequently adopted by the United States Army Military Police (USAMPS) polygraph school in 1961. The ZCT, as adopted by this Guide, is currently being taught at NCCA and has changed little from the original USAMPS testing format.

#### C7.3. PRETEST PHASE

C7.3.1. Question Review. During the pretest interview, all ZCT questions are reviewed with the examinee prior to the collection of test data.

Figure C7.F1. Question Review Sequence

Sacrifice Relevant (SR) Relevant ( R ) Comparison ( C ) Irrelevant ( I ) Symptomatic (SYM)
--

C7.3.2. ZCT Format Questions. The following question types are used in this format.

C7.3.2.1. Primary Relevant. This question tests the possible direct involvement of the examinee. The primary relevant questions are R5 and R7. Question R7 is an extension of or a paraphrasing of R5.

Figure C7.F2. Samples of Primary Relevant Questions

R5 Did you steal that Mustang? R7 Did you steal that Mustang from that parking lot? R7 (Alternate) Are you the person who stole that Mustang from the Sears parking lot?
--

C7.3.2.2. Secondary Relevant. This question tests the examinee's secondary involvement in the offense under investigation. The secondary relevant question is R10. Under no circumstance should question R10 be a primary relevant question.

Figure C7.F3. Samples of Secondary Relevant Questions

Did you help steal that Mustang?  
Do you know (for sure) who stole that Mustang?  
Did you plan with anyone to steal that Mustang?

C7.3.2.3. Probable-Lie Comparison (PLC) Question. A PLC question addresses the denial of a misdeed in which the examinee has likely engaged. This question is designed to be a probable-lie for the examinee. The PLC question should be similar in nature but unrelated to the specific crime or issue(s) being tested. The question should be separated from the relevant issue by time, place, or category. The PLC question should use the same action verb or a similar-in-nature action verb as that of the relevant issue. A PLC question should be broad in scope and time so that it captures as many of the examinee's past-life experiences as possible.

Figure C7.F4. Samples of a Probable-Lie Comparison Questions

While living in California, did you ever steal anything?  
Before arriving in SC, did you ever steal anything from your work place?  
Before this year, did you ever steal anything from someone who trusted you?

C7.3.2.4. Sacrifice Relevant Question. This is the first question of the ZCT format that refers to the relevant issue, and it prepares the examinee for the introduction of the relevant questions. The sacrifice relevant question is always the #2 question in the ZCT.

Figure C7.F5. Sample of a Sacrifice Relevant Question

Regarding the stealing of that car, do you intend to answer each question truthfully?

C7.3.2.5. Irrelevant Question. The irrelevant is the first question asked during the data collection phase. It may also be asked in other positions in the question string. It is designed to allow the orienting response to habituate before a question that is to be evaluated is asked. The irrelevant question can be used to establish homeostasis when an artifact occurs. Irrelevant questions should be neutral and unrelated to the issue being tested. Irrelevant questions are not numerically evaluated. Several irrelevant questions may be reviewed and used as needed.

Figure C7.F6. Samples of Irrelevant Questions

Are you now in Alabama?  
Are the lights on in this room?

C7.3.2.6. Symptomatic Question. This question is designed to test for an outside issue that could be more significant for an examinee than the relevant and comparison issues. Symptomatic questions are not numerically evaluated during the test data analysis phase of a

polygraph examination. Symptomatic questions are always questions #3 and #8 in the ZCT question format.

Figure C7.F7. Sample of Symptomatic Questions #3 and #8

SYM #3	Do you believe I will only ask you the questions we reviewed?
SYM #8	Is there something else you are afraid I will ask you a question about?

#### C7.4. DATA COLLECTION

##### C7.4.1. Question String.

Figure C7.F8. Data Collection Question String (Larceny)

I	1. Are the lights on in this room?
SR	2. Regarding the stealing of that money, do you intend to answer each question truthfully?
SYM	3. Do you believe I will only ask you the questions we reviewed?
C	4. While in college, did you ever steal anything from someone who trusted you?
R	5. Did you steal any of that money from that safe?
C	6. While in California, did you ever steal anything?
R	7. Did you steal any of that money from that safe in that Arby's Restaurant?
SYM	8. Is there something else you are afraid I will ask you a question about?
C	9. Prior to this year, did you ever steal anything from an employer?
R	10. Do you know where any of that stolen money was disposed of?

##### C7.4.2. Question Format Requirements.

C7.4.2.1. With the possible exception of irrelevant questions, all questions reviewed during the pretest phase of the examination will be asked during the data collection phase of each question string.

C7.4.2.2. Following the collection of the test data for the first ZCT question string, the comparison questions may be rotated. The comparison question exhibiting the greatest physiological response should be placed adjacent to the relevant question exhibiting the greatest physiological response. The rotation of the comparison questions may be made on all subsequent charts. Relevant questions remain fixed in the question string during the collection of all test data. Relevant questions are not rotated as in other testing formats.

C7.4.2.3. In most instances, the collection of three presentations of the relevant questions is appropriate. A fourth question string may be collected if a conclusive opinion cannot be provided after the third presentation of the relevant questions. The numerical total required for a

conclusive opinion remains the same for three, four or five presentations of a relevant question in a single series. All questions that comprise each question string for the ZCT will be presented during each question string.

C7.4.3. Conduct of an Acquaintance Test. The ACQT (Chapter 6 of this Guide) should be collected as the first chart of this examination. It is conducted, in part, to acquaint the examinee with polygraph procedures. The known solution ACQT is the only ACQT recognized in this Guide.

## C7.5. TEST DATA ANALYSIS

C7.5.1. Numerical Analysis. The two numerical evaluation procedures that may be used with the ZCT format are the 3- and 7-position evaluation systems.

C7.5.2. Spot Analysis. Each relevant question within the question string is combined with other questions in the string for evaluation purposes to form what is referred to as a spot. The examiner monitors and evaluates the examinee's responses in these spots. The three spots of the ZCT are:

C7.5.2.1. Spot I: R5 – Compare bracketing CQs to R5.

C7.5.2.2. Spot II: R7 – Compare only the middle/left bracketing CQ to R7.

C7.5.2.3. Spot III: R10 – Compare only the final/right bracketing CQ to R10.

### C7.5.3. Test Data Analysis Procedures.

C7.5.3.1. When comparing relevant and comparison questions, each component tracing will be reviewed and compared independently.

C7.5.3.2. The physiological responses of the relevant question(s) are compared to the greatest physiological responses of the adjacent comparison question designated by this format.

C7.5.3.3. The examiner should be formally trained with the criteria detailed in Chapter 5 of this Guide.

### C7.5.4. Opinion Criteria

C7.5.4.1. Deception Indicated. To provide an opinion that the examinee is deceptive on the ZCT, the score must be minus three (-3) or less in any overall vertical spot or a cumulative (grand) horizontal total of minus six (-6) or less when adding the total numerical scores for all spots.

C7.5.4.2. No Deception Indicated. To provide an opinion of no-deception, there must be a plus one (+1) or greater in every vertical spot total with a horizontal cumulative spot total of plus six (+6) or greater.

C7.5.4.3. No Opinion. When based upon an evaluation of the physiological data collected an opinion of DI or NDI cannot be provided, the decision for that series is NO.

Figure C7.F9. Sample of ZCT Test Data Analysis Opinion Criteria when the Examinee is DI to the series.

<b>Chart #</b>	<b>Spot I (RQ 5)</b>	<b>Spot II (RQ 7)</b>	<b>Spot III (RQ 10)</b>	<b>Cumulative Total</b>	<b>Series Opinion</b>	<b>Comments</b>
<b>Chart 1</b>	+2	-5	+3	0	DI	-3 or less at any spot is DI despite cumulative total
<b>Chart 2</b>	-2	-2	-2	-6	DI	-6 or less cumulative total is DI despite spot totals
<b>Chart 3</b>	+2	-4	-4	-6	DI	-3 or less at any spot is DI

Figure C7.F10. Sample of ZCT Test Data Analysis Opinion Criteria when the Examinee is NDI to the series.

<b>Chart #</b>	<b>Spot I (RQ 5)</b>	<b>Spot II (RQ 7)</b>	<b>Spot III (RQ 10)</b>	<b>Cumulative Total</b>	<b>Series Opinion</b>	<b>Comments</b>
<b>Chart 1</b>	+2	+4	+3	+9	NDI	+ 1 or greater in every spot and a + 6 or greater cumulative total is NDI
<b>Chart 2</b>	+1	+1	+4	+6	NDI	+ 1 or greater in every spot and a + 6 or greater cumulative total is NDI
<b>Chart 3</b>	+3	+3	+3	+9	NDI	+ 1 or greater in every spot and a + 6 or greater cumulative total is NDI

Figure C7.F11. Sample of ZCT Test Data Analysis Opinion Criteria when the Examinee is NO to the series.

Spot Totals	Spot I (RQ 5)	Spot II (RQ 7)	Spot III (RQ 10)	Cumulative Total	Series Opinion	Comments
<b>Chart 1</b>	-2	+6	+6	+10	NO	-2 indicates NO despite +10 cumulative total
<b>Chart 2</b>	+1	0	+6	+7	NO	0 indicates NO despite +6 cumulative total
<b>Chart 3</b>	+1	+2	+2	+5	NO	+5 cumulative total indicates NO despite +1 or greater in each spot

C7.5.4.4. Administrative Opinion. This opinion reflects the results of a series or an examination that are not based upon physiological responses to the applied stimuli, e.g., when the examinee terminates an examination or is practicing countermeasures. In these instances, an administrative opinion such as inconclusive or interrupt is appropriate.

#### C7.6. QUESTION STRING SAMPLES

Figure C7.F12. Sample of ZCT Question String (Shooting)

I	Are the lights on in this room?
SR	Regarding that shooting, do you intend to answer each question truthfully?
SYM#3	Do you believe I will only ask you the questions we reviewed?
C	Prior to 2009, did you ever hurt a friend?
R	Did you shoot that man that night?
C	While in Virginia, did you ever hurt anyone?
R	Did you shoot that man that night in the Hooters parking lot?
SYM#8	Is there something else you are afraid I will ask you a question about?
C	While in high school, did you ever lie about hurting anyone?
R	Do you know for sure who shot that man?
1a	Are you in South Carolina?
1b	Are the lights on in this room?

Figure C7.F13. Sample of ZCT Question String for Rape when the subject admitted having sex and force is an issue.

I	Are you sitting down?
SR	Regarding placing your penis inside Mary's vagina, do you intend to answer each question truthfully?
SYM#3	Do you believe I will only ask you the questions we reviewed?
C	Prior to 2009, did you ever lie about a sex act?
R	Did you place your penis inside Mary's vagina against her will?
C	As a teenager, did you ever perform an unnatural sex act?
R	Did you place your penis inside Mary's vagina against her will that night?
SYM#8	Is there something else you are afraid I will ask you a question about?
C	Prior to this year, did you ever lie about something you are ashamed of?
R	Did you slap Mary that night?
1a	Have you ever been a passenger in a car??
1b	Are the lights on in this room?

Figure C7.F14. Sample of ZCT Question String (Rape) when sexual intercourse was denied.

I	Are you sitting down?
SR	Regarding placing your penis inside Mary's vagina, do you intend to answer each question truthfully?
SYM#3	Do you believe I will only ask you the questions we reviewed?
C	As a teenager, did you ever lie about a sex act?
R	Did you have sexual intercourse with Mary that night?
C	While living in California, did you ever lie to get out of trouble?
R	Did you have sexual intercourse with Mary that night in her apartment?
SYM#8	Is there something else you are afraid I will ask you a question about?
C	Prior to this year, did you ever perform a sex act you are ashamed of?
R	Were you in Mary's bedroom that night?
1a	Have you ever driven a car?
1b	Are the lights on in this room?

Figure C7.F15. Sample of ZCT Question String (Forgery)

I	Are you now in VA?
SR	Regarding the writings on those checks, do you intend to answer each question truthfully?
SYM#3	Do you believe I will only ask you the questions we reviewed?
C	Prior to 2009, did you ever lie to an employer?
R	Did you make any of the writings on any of those checks?
C	Prior to your 29 <sup>th</sup> birthday, did you ever lie to get out of trouble?
R	Are you the person who made any of that writing on any of those checks?
SYM#8	Is there something else you are afraid I will ask you a question about?
C	Prior to this year, did you ever lie about something important?
R	Do you know who made any of the writings on any of those checks?
1a	Are you sitting down?
1b	Are the lights on in this room?

Figure C7.F16. Sample of ZCT Question String (Homicide-by unknown means)

I	Are you now in VA?
SR	Regarding the death of that woman, do you intend to answer each question truthfully?
SYM#3	Do you believe I will only ask you the questions we reviewed?
C	Prior to 2009, did you ever intentionally hurt anyone?
R	Did you cause the death of that woman?
C	Prior to your 29 <sup>th</sup> birthday, did you ever hurt a loved one?
R	Did you cause the death of that woman in that house?
SYM#8	Is there something else you are afraid I will ask you a question about?
C	Prior to this year, did you ever lie about hurting someone?
R	Did you help anyone cause that woman's death?
1a	Are you sitting down?
1b	Are the lights on in this room?
	<u>Optional Secondary RQs</u>
R	Were you in that house when that woman was harmed?
R	Did you see anyone harm that woman?

## C8. CHAPTER 8

### YOU-PHASE ZONE COMPARISON TEST

#### C8.1. SCOPE

This Guide establishes essential elements for the conduct of the You-Phase ZCT, previously known as the Bi-Zone, for participating law enforcement agencies.

#### C8.2. BACKGROUND

The You-Phase ZCT was designed by Cleve Backster and a variation of that format was subsequently adopted by USAMPS in 1961. The You-Phase ZCT as taught by NCCA has changed little from the original Backster testing format. The You-Phase ZCT adopted by this Guide is the version taught at NCCA.

#### C8.3. PRETEST PHASE

C8.3.1. Question Review. During the pretest interview, all questions are reviewed with the examinee prior to the collection of test data.

Figure C8.F1. Question Review Sequence

Sacrifice Relevant (SR) Relevant ( R ) Comparison ( C ) Irrelevant ( I ) Symptomatic (SYM #3 and #9)
--

C8.3.2. You-Phase ZCT Format Questions. The following question types are used in this format.

C8.3.2.1. Primary Relevant Question. This question tests the possible direct involvement of the examinee. The primary relevant questions are R5 and R7. Question R7 is an extension or a paraphrasing of question R5.

Figure C8.F2. Samples of Primary Relevant Questions

R5 Did you force that woman to have sexual intercourse? R7 Did you force that woman to have sexual intercourse in that park? R7 (Alternate) Are you the person who forced that woman to have sexual intercourse in that park? R5 Did you place your penis in Mary's vagina against her will? R7 Did you place your penis in Mary's Vagina against her will in that park? R7 (Alternate) Are you the person who placed his penis in Mary's vagina against her will?
---

C8.3.2.2. Probable-Lie Comparison (PLC) Question. A PLC question addresses the denial of a misdeed in which the examinee has likely engaged. This question is designed to be a probable-lie for the examinee. The PLC question should be similar in nature but unrelated to the specific crime or issue(s) being tested. The question should be separated from the relevant issue by time, place, or category. The PLC question should use the same action verb or a similar-in-nature action verb as that of the relevant issue. A PLC question should be broad in scope and time so that it captures as many of the examinee's past-life experiences as possible.

Figure C8.F3. Samples of Probable-Lie Questions

Before 2009, did you ever commit an unnatural sex act?  
While in school, did you ever do anything sexual you would be ashamed to talk about?  
While living in California, did you ever do anything with a date others would say is abnormal?  
Before your 19<sup>th</sup> birthday, did you ever lie about a sex act?

C8.3.2.3. Sacrifice Relevant. This is the first question of the You-Phase ZCT format that refers to the relevant issue, and it prepares the examinee for the introduction of the relevant questions. Relevant questions in the You-Phase ZCT address only the primary issue, for example, "Did you force that woman to have sexual intercourse?" Therefore, unlike the ZCT, the scope of the sacrifice relevant question should be limited to the specific issue addressed by the relevant question. The sacrifice relevant question is always the #2 question in the You-Phase ZCT question string.

Figure C8.F4. Sample of a Sacrifice Relevant Question

Regarding whether or not you forced that woman to have sexual intercourse, do you intend to answer each question truthfully?

C8.3.2.4. Irrelevant Question. This is the first question asked during the data collection phase. It may also be asked in other positions in the question string. It is designed to allow the orienting response to habituate before a question that is to be evaluated is asked. The irrelevant question can be used to establish homeostasis when an artifact occurs. Irrelevant questions should be neutral and unrelated to the issue being tested. Irrelevant questions are not numerically evaluated. Several irrelevant questions may be reviewed and used as needed.

Figure C8.F5. Samples of Irrelevant Questions

Are you now in Alabama?  
Is today Thursday?  
Are you now sitting down?  
Are you sometimes called Tom?

C8.3.2.5. Symptomatic Questions. This question is designed to test for an outside issue that could be more significant for an examinee than the relevant and comparison issues. The responses to the symptomatic question are not numerically evaluated during the test data analysis phase of a polygraph examination. The symptomatic questions are #3 and #9 in the You-Phase ZCT format.

Figure C8.F6. Samples of Symptomatic Questions #3 and #9

SYM #3 Do you believe I will only ask you the questions we reviewed?
SYM #9 Is there something else you are afraid I will ask you a question about?

#### C8.4. DATA COLLECTION

##### C8.4.1. Question String.

Figure C8.F7. Data Collection String (Homicide – Shooting)

I	Are the lights on in this room?
SR	Regarding whether or not you shot Thomas, do you intend to answer each question truthfully?
SYM#3	Do you believe I will only ask you the questions we reviewed?
C	Prior to 2009, did you ever hurt a loved one?
R	Did you shoot Thomas that night?
C	Prior to coming to Alabama, did you intentionally hurt anyone?
R	Did you shoot Thomas that night in his apartment?
C	While in college, did you ever hurt anyone out of anger?
SYM#9	Is there something else you are afraid I will ask you a question about?

##### C8.4.2. Question Format Requirements.

C8.4.2.1. With the possible exception of irrelevant questions, all questions reviewed during the pretest phase of the examination will be asked during the data collection phase of each question string.

C8.4.2.2. Following the collection of the test data for the first You-Phase ZCT question string, the comparison questions may be rotated. The comparison question exhibiting the greatest physiological response should be placed adjacent to the relevant question exhibiting the greatest physiological response. Comparison questions may be rotated on all subsequent question strings. Relevant questions remain fixed in their serial positions during the collection of all test data. Relevant questions are not rotated as in other testing formats.

C8.4.2.3. In most instances, the collection of three presentations of the relevant questions is appropriate. A fourth asking may be collected if a conclusive opinion cannot be provided after

the third presentation of the relevant questions. The numerical total required for a conclusive opinion remains the same for three, four, five presentations of a relevant question in a single series. All questions that comprise each question string for the You-Phase ZCT will be presented during each question string.

C8.4.3. Conduct of an Acquaintance Test. The ACQT (Chapter 6 of this Guide) should be collected as the first chart of this examination. It is conducted, in part, to acquaint the examinee with polygraph procedures. The known-solution ACQT is the only ACQT recognized in this Guide.

## C8.5. TEST DATA ANALYSIS

C8.5.1. Numerical Analysis. The two numerical evaluation procedures for use with the ZCT are the 3- and 7-position evaluation systems.

C8.5.2. You-Phase Spot Analysis. Each relevant question within the question string is combined with other questions in the string for evaluation purposes to form what is referred to as a spot. The examiner monitors and evaluates the examinee's responses in these spots. The two spots of the You-Phase ZCT are:

C8.5.2.1. Spot I: R5 is compared to bracketing CQs.

C8.5.2.2. Spot II: R7 is compared to bracketing CQs.

C8.5.3. Test Data Analysis Procedures.

C8.5.3.1. When comparing relevant and comparison questions, each component tracing will be reviewed and compared independently.

C8.5.3.2. Physiological responses of the relevant questions are compared to the greatest physiological responses of the adjacent comparison question designated by this format.

C8.5.3.3. The examiner should be formally trained with the TDA criteria detailed in Chapter 5 of this Guide.

C8.5.4. Opinion Criteria.

C8.5.4.1. Deception Indicated. To provide an opinion that the examinee is deceptive on the You-Phase ZCT, the score must be minus three (-3) or less in any overall vertical spot or a grand cumulative (horizontal) total of minus four (-4) or less when adding the total numerical scores for all spots.

C8.5.4.2. No Deception Indicated. To provide an opinion of no-deception, there must be a plus one (+1) or greater in every overall spot with a grand horizontal total of plus four (+4) or greater when adding the total numerical scores for all spots.

C8.5.4.3. No Opinion. If based upon an evaluation of the physiological data collected an opinion of DI or NDI cannot be provided, the decision for that series is NO.

Figure C8.F8. Sample of You-Phase ZCT TDA Opinion Criteria when Examinee is DI.

Chart #	Spot I (RQ 5)	Spot II (RQ 7)	Cumulative Total	Series Opinion	Comments
Chart 1	+3	-5	-2	DI	-3 or less in a spot is DI despite the cumulative total
Chart 2	-2	-2	-4	DI	-3 or less in a spot is DI despite the cumulative total
Chart 3	-3	-3	-6	DI	-3 or less in a spot and/or -4 or less cumulative total is DI

Figure C8.F9. Sample of You-Phase ZCT TDA Opinion Criteria when Examinee is NDI.

Chart#	Spot I (RQ 5)	Spot II (RQ 7)	Cumulative Total	Series Opinion	Comments
Chart 1	+2	+2	+4	NDI	+1 or greater in every spot and +4 or greater cumulative total is NDI
Chart 2	+5	+1	+6	NDI	+1 or greater in every spot and +4 or greater cumulative total is NDI
Chart 3	+3	+3	+6	NDI	+1 or greater in every spot and +4 or greater cumulative total is NDI

Figure C8.F10. Sample of You-Phase ZCT TDA Opinion Criteria when Examinee is NO

Chart #	Spot I (RQ 5)	Spot II (RQ 7)	Cumulative Total	Series Opinion	Comments
Chart 1	-2	+6	+4	NO	-2 in a spot indicates NO despite +4 cumulative total
Chart 2	+5	0	+5	NO	0 in a spot indicates NO despite +5 cumulative total
Chart 3	+1	+2	+3	NO	+3 cumulative total indicates NO despite +1 in each spot

C8.5.4.4. Administrative Opinion. These opinions reflect the results of a series or an examination that are not based upon physiological responses to the applied stimuli, e.g., when the examinee terminates an examination or is practicing countermeasures. In these instances, administrative opinions such as inconclusive or interrupt are appropriate.

C8.6. QUESTION STRING SAMPLES

Figure C8.F11. Sample of a You-Phase ZCT Question String (Mailing Marijuana)

I	Are you now in MD?
SR	Regarding whether or not you mailed that marijuana, do you intend to answer each question truthfully?
SYM#3	Do you believe I will only ask you the questions we reviewed?
C	While living in Texas, did you ever lie about something important?
R	Did you put that box containing marijuana in the mail?
C	Prior to coming to MD, did you ever lie to get out of trouble?
R	Did you put that box containing marijuana in the mail in Laurel, MD?
C	Prior to this year, did you ever lie to an employer?
SYM#9	Is there something else you are afraid I will ask you a question about?

Figure C8.F12. Sample of a You-Phase ZCT Question String (False Swearing Robbery/Confirmatory Polygraph)

I	Are you now in Pennsylvania?
SR	Regarding whether or not that man stole your purse, do you intend to answer each question truthfully?
SYM#3	Do you believe I will only ask you the questions we reviewed?
C	Prior to 2009, did you ever lie to an employer?
R	Did that man steal your purse?
C	Prior to arriving in AL, did you ever lie to get out of trouble?
R	Did that man steal your purse in front of Macy's Department store?
C	Before your 28 <sup>th</sup> birthday, did you ever lie to get someone in trouble?
SYM#9	Is there something else you are afraid I will ask you a question about?

## C9. CHAPTER 9

### AIR FORCE MODIFIED GENERAL QUESTION TEST (AFMGQT)

#### C9.1. SCOPE

This Guide establishes essential elements for the conduct of AFMGQT examinations for participating law enforcement (LE) agencies.

#### C9.2. BACKGROUND

The AFMGQT is a variation of the Modified General Question Test (MGQT). Variations of the MGQT used in specific issue testing question formats adopted in this Guide have been validated through research and are being taught at the National Center for Credibility Assessment (NCCA). This format is used for specific issue testing.

#### C9.3. PRETEST PHASE

C9.3.1. Question Review. During the pretest interview, all questions are reviewed with the examinee prior to the collection of test data.

Figure C9.F1. Question Review Sequence

Sacrifice Relevant (SR) Relevant ( R ) Comparison ( C ) Irrelevant ( I )
---

C9.3.2. AFMGQT Format Questions. The following question types are used in AFMGQT applications.

C.9.3.2.1. Primary Relevant. This question tests the possible direct involvement of the examinee.

Figure C9.F2. Samples of a Primary Relevant Question

Did you make any of the writings on that timesheet? Did you shoot James that night? Did you steal any of those computer parts from that Radio Shack store that night?
---

C9.3.2.2. Secondary Relevant. This question tests the examinee's possible involvement in the offense under investigation. In the AFMGQT, there are three types of secondary relevant questions.

C9.3.2.2.1. Evidence-Connecting. An evidence-connecting question is designed to determine if the examinee is involved with any physical acts that support the offense, or is aware of the nature or location of various items of evidence.

Figure C9.F3. Sample of an Evidence-Connecting Relevant Question

Did you handle any of those timesheets?

C9.3.2.2.2. Guilty-Knowledge. A guilty-knowledge question is used to determine if the examinee has any knowledge of who committed the incident under investigation.

Figure C9.F4. Samples of Guilty-Knowledge Relevant Questions

Do you know who made any of the writings on any of those timesheets?  
Do you know who submitted those timesheets to the Payroll Division?

C9.3.2.2.3. Secondary-Involvement. This question tests for secondary involvement such as to help, plan or participate in the primary offense.

Figure C9.F5. Samples of Secondary-Involvement Relevant Questions

Did you plan with anyone to make any of the writings on any of those timesheets?  
Did you participate in robbing Anthony's Pizzeria that night?  
Did you help anyone steal any of that money from Alice's cash register?

C9.3.3. Probable-Lie Comparison (PLC) Question. A PLC question addresses the denial of a misdeed in which the examinee has likely engaged. This question is designed to be a probable-lie for the examinee. The PLC question should be similar in nature but unrelated to the specific crime or issue(s) being tested. The question should be separated from the relevant issue by time, place, or category. The PLC question should use the same action verb or a similar-in-nature action verb as that of the relevant issue. A PLC question should be broad in scope and time so that it captures as many of the examinee's past-life experiences as possible.

Figure C9.F6. Samples of PLC Questions

Before 2009, did you ever falsify an official document?  
Before this year, did you ever lie to a person in authority?

C9.3.4. Sacrifice Relevant. This is the first question that refers to the relevant issue, and it prepares the examinee for the introduction of the relevant questions. The sacrifice relevant question is always the second question in the AFMGQT format.

Figure C9.F7. Sample of a Sacrifice Relevant Question

Regarding the writings on those checks, do you intend to answer each question truthfully?

C9.3.5. Irrelevant Question. This is the first question asked during the data collection phase. It may also be asked in other positions in the question string. It is designed to allow the

orienting response to habituate before a question that is to be evaluated is asked. The irrelevant question can be used to establish homeostasis when an artifact occurs. Irrelevant questions should be neutral and unrelated to the issue being tested. Irrelevant questions are not numerically evaluated. Several irrelevant questions may be reviewed and used as needed

Figure C9.F8. Samples of Irrelevant Questions

Are you now in Alabama? Have you ever driven an automobile? Are you now sitting down?
---

#### C9.4. DATA COLLECTION PHASE

##### C9.4.1. AFMGQT Question Strings for Versions 1 and 2 with 2, 3, and 4 RQs

Figure C9.F9. Question String: Version 1, 2RQ AFMGQT (Larceny)

I	Are you now in the state of Alabama?
SR	Regarding stealing any of those computers, do you intend to answer each question truthfully?
C	Prior to 2008, did you ever steal anything from someone who trusted you?
R	Did you participate in stealing any of those computers from Aces Pawn shop?
C	Before your 24 <sup>th</sup> Birthday, did you ever steal anything?
R	Did you steal any of those computers from Aces Pawn Shop?
C	While living in Texas, did you ever steal anything from an employer?

Figure C9.F10. Question String: Version 2, 2RQ AFMGQT (Larceny)

I	Are you now in the state of Alabama?
SR	Regarding stealing any of those computers, do you intend to answer each question truthfully?
C	Prior to 2008, did you ever steal anything from someone who trusted you?
R	Did you participate in stealing any of those computers from Aces Pawn shop?
R	Did you steal any of those computers from Aces Pawn Shop?
C	While living in Texas, did you ever steal anything from an employer?

Figure C9.F11. Question String: Version 1, 3RQ AFMGQT (Assault)

I	Are you now sitting down?
SR	Regarding the shooting of that woman, do you intend to answer each question truthfully?
C	Prior to 2009, did you ever hurt anyone out of anger?
R	Did you participate in shooting that woman?
C	Prior to this year, did you ever hurt anyone?
R	Did you shoot that woman in those woods?
C	Before this year, did you ever hurt a loved one?
R	Were you in those woods that night?
C	Prior to this year, did you ever lie about hurting anyone?

Figure C9.F12. Question String: Version 2, 3RQ AFMGQT (Assault)

I	Are you now sitting down?
SR	Regarding the shooting of that woman, do you intend to answer each question truthfully?
C	Prior to 2009, did you ever get mad and hurt anyone?
R	Did you participate in shooting that woman?
C	Prior to this year, did you ever hurt anyone?
R	Did you shoot that woman in those woods?
R	Were you in those woods that night?
C	Prior to this year, did you ever lie about hurting anyone?

Figure C9.F13. Question String: Version 1, 4RQ AFMGQT (Mailing Anthrax)

I	Are the lights on in this room?
SR	Regarding the mailing of that anthrax, do you intend to answer each question truthfully?
C	Prior to 2009, did you ever lie to an acquaintance?
R	Did you plan with anyone to mail any of that anthrax to that reporter?
C	While in Texas, did you ever lie about something important?
R	Did you mail any of that anthrax to that reporter?
C	Prior to this year, did you ever lie to a person in authority?
R	Did you put that anthrax into that envelope?
C	Before age 18, did you ever lie to cover up anything?
R	Do you know who mailed that anthrax to that reporter?

Figure C9.F14. Question String: Version 2, 4RQ AFMGQT (Mailing Anthrax)

I	Are the lights on in this room?
SR	Regarding the mailing of that anthrax, do you intend to answer each question truthfully?
C	Prior to 2009, did you ever lie to an acquaintance?
R	Did you plan with anyone to mail any of that anthrax to that reporter?
R	Did you mail any of that anthrax to that reporter?
C	During high school, did you ever lie to a person in authority?
R	Did you put that anthrax into that envelope?
R	Do you know who mailed that anthrax to that reporter?
C	While living with your parents, did you ever lie to cover up anything?

#### C9.4.2. Question Format Requirements.

C9.4.2.1. Question Review. With the possible exception of irrelevant questions, all questions reviewed during the pretest phase of the examinations are asked during the data collection phase of each question string. The exact sequence in which the questions are to be asked during the data collection phase is not revealed.

C9.4.2.2. Question String. The test format begins with an irrelevant question. Irrelevant questions may be inserted into each question string as needed. A sacrifice relevant question is the second question asked in this test format. Two to four relevant questions may be used; the proper question strings for two-four relevant questions series for versions one and two of the AFMGQT can be found in paragraph C9.4.1.

C9.4.2.3. Question Rotation. Following the collection of the test data for the first AFMGQT string, the comparison and/or relevant questions should be rotated. At least one of the subsequent presentations of the question string must involve rotating the relevant and/or comparison questions. After the first question string (chart), subsequent presentations should be constructed so that the relevant question that displayed the greatest physiological responses is adjacent to the comparison question(s) with the greatest physiological response(s).

C9.4.2.3. Chart Collection. In most instances, the collection of three presentations of the relevant questions is appropriate. A fourth question string may be collected if a conclusive opinion cannot be provided after the third presentation of the relevant questions. The numerical total required for a conclusive opinion remains the same for three, four or five presentations of a relevant question in a single series. All questions that comprise each question string for an AFMGQT will be presented during each question string.

C9.4.2.4. Testing a Single Issue. When a single relevant question test is required; the You-Phase ZCT should be used. A single issue relevant question AFMGQT is not appropriate.

C9.4.3. Conduct of an Acquaintance Test. The ACQT should be collected as the first chart of this examination. It is conducted, in part, to acquaint the examinee with polygraph procedures. The known solution ACQT is the only ACQT recognized in this Guide.

## C9.5. TEST DATA ANALYSIS

C9.5.1. Numerical Analysis. The two numerical evaluation procedures used with the AFMGQT are the 3- and 7-position evaluation systems.

C9.5.2. Spot Analysis. Each relevant question within the question string is combined with other questions in the string for evaluation purposes to form what is referred to as a spot. The examiner monitors and evaluates the examinee's responses in these spots.

C9.5.2.1. Version 1: Format for 2 or 3RQs: RQs are compared to bracketing CQs.

C9.5.2.2. Version 2: Format for 2, 3, or 4RQs: RQs are compared to bracketing CQs.

C9.5.2.3. Version 1: Format for 4RQs: 3 RQs are compared to the bracketing relevant questions. The 4<sup>th</sup> RQ is compared to the CQ that precedes it.

C9.5.3. Test Data Analysis Procedures.

C9.5.3.1. When comparing relevant and comparison questions, each component tracing is reviewed and compared independently.

C9.5.3.2. Physiological responses of the relevant question is compared to the greatest physiological responses of the adjacent comparison question as designated by this format.

C9.5.3.3. The examiner should be formally trained with the TDA criteria detailed in Chapter 5 of this Guide.

C9.5.4. Opinion Criteria.

C9.5.4.1. Deception Indicated (DI). To provide a DI opinion, the score must be minus three (-3) or less in any overall vertical spot. An overall horizontal spot total is not used to provide an opinion as is required when using a ZCT format.

C9.5.4.2. No Deception Indicated (NDI). To provide an NDI opinion, the score must be a plus three (+3) or greater in every overall vertical spot.

C9.5.4.3. No Opinion (NO). When based upon an evaluation of the physiological data collected an opinion of DI or NDI cannot be provided, the decision for that series is NO.

Figure C9.F15. Sample of AFMGQT TDA Opinion Criteria when Examinee is DI

Chart #	Spot I (RQ1)	Spot II (RQ2)	Spot III (RQ3)	Spot IV (RQ4)	Series Opinion	Comments Note: Cumulative score is not used
Chart 1	+3	-5	+2	+5	DI	-3 or less in any spot is DI
Chart 2	-3	-2	-4	0	DI	-3 or less in any spot is DI
Chart 3	-3	+3	+6	-4	DI	-3 or less in any spot is DI

Figure C9.F16. Sample of AFMGQT TDA Opinion Criteria when Examinee is NDI

Chart #	Spot I (RQ1)	Spot II (RQ2)	Spot III (RQ3)	Series Opinion	Comments
Chart 1	+3	+3	+4	NDI	+3 or greater in every spot is NDI
Chart 2	+5	+3	+4	NDI	+3 or greater in every spot is NDI
Chart 3	+3	+3	+4	NDI	+3 or greater in every spot is NDI

Figure C9.F17. Sample of AFMGQT TDA Opinion Criteria when Examinee is No

Chart #	Spot I (RQ1)	Spot II (RQ2)	Spot III (RQ3)	Series Opinion	Comments
Chart 1	-2	+6	+4	NO	-2 at RQ1 indicates NO
Chart 2	+4	+1	+4	NO	+1 at RQ2 indicates NO
Chart 3	+1	+2	+3	NO	+1 at RQ1 and +2 at RQ2 indicates NO

C9.5.4.4. Administrative Opinion. This opinion reflects the results of a series or examination that are not based upon physiological responses to the applied stimuli, e.g., when the examinee terminates an examination or is practicing countermeasures. In these instances, administrative opinions such as inconclusive or interrupt are appropriate.

## C9.6. QUESTION STRING SAMPLES

Figure C9.F18. Data Collection String Version 1: 2RQ AFMGQT (Larceny)

I	Are you now in the state of Alabama?
SR	Regarding the stealing of that stereo equipment, do you intend to answer each question truthfully?
C	Prior to 2009, did you ever steal anything from an employer?
R	Did you participate in stealing any of that stereo equipment?
C	While living in Oklahoma, did you ever steal anything?
R	Did you steal any of that stereo equipment from Radio Shack?
C	As a teenager, did you ever steal anything and not get caught?

Figure C9.F19. Data Collection String Version 2: 3RQ AFMGQT (Murder)

I	Are you now sitting down?
SR	Regarding stabbing Harold, do you intend to answer each question truthfully?
C	Prior to 2009, did you ever hurt anyone out of anger?
R	Did you participate in the stabbing of Harold?
C	While living in Missouri, did you ever hurt anyone?
R	Did you stab Harold that night?
R	Were you in Harold's apartment when he was stabbed that night?
C	Prior to moving to Ohio, did you ever hurt someone close to you?

Figure C9.F20. Data Collection String Version 2: 4RQ AFMGQT (Robbery)

I	Are the lights on in this room?
SR	Regarding the robbery at Harvey's Bar, do you intend to answer each question truthfully?
C	Prior to 2009, did you ever steal anything from a loved one (family member)?
R	Did you participate in robbing Harvey's bar?
R	Did you rob Harvey's Bar?
C	Prior to your 21 birthday, did you ever steal anything?
R	Were you in Harvey's Bar that night?
R	Did you spend any of that money stolen from Harvey's Bar?
C	Prior to this year, did you ever steal anything from a place you worked?

## C10. CHAPTER 10

### LAW ENFORCEMENT PRE-EMPLOYMENT TEST (LEPET)

#### C10.1. SCOPE

This Guide establishes the essential elements for use of the LEPET format by participating law enforcement (LE) agencies.

#### C10.2. BACKGROUND

LEPET examinations are a version of the Modified General Question Test. LEPET formats are used by federal, state and local agencies as a primary personnel screening technique to test applicants for employment in sensitive LE positions. The LEPET format may address security, integrity, and suitability issues. This version of LEPET addresses suitability issues for LE agencies.

#### C10.3. PRETEST PHASE

C10.3.1. Question Review. During the pretest interview, all questions are reviewed with the examinee prior to the collection of test data.

Figure C10.F1. Question Review Sequence for LEPET.

Sacrifice Relevant (SR) Relevant ( R ) Comparison ( C ) Irrelevant ( I )
---

C10.3.2. Format Questions. The following question types are used in LEPET formats.

C10.3.2.1. Relevant Questions. These questions pertain directly to the issues being tested. The relevant questions address concerns of individual agencies involving pre-employment issues. (See figure C10.F2.)

Figure C10.F2. Sample of Relevant Questions for LEPET.

Are you deliberately falsifying any information on your application forms? Are you concealing any illegal drug activity? Are you withholding information about your involvement with any serious crimes?
--

C10.3.2.2. Probable-Lie Comparison (PLC). A PLC question addresses the denial of a misdeed in which the examinee has likely engaged. This comparison question should be

separated from the relevant issues by time, place, or category. The PLC question should be broad in scope and time so that it captures as many of the examinee's past life experiences as possible.

Figure C10.F3. Sample of a Probable-Lie Comparison Question

Prior to your 21<sup>st</sup> birthday, did you ever lie to anyone who trusted you?

C10.3.2.3. Sacrifice Relevant. This is the first question of the format that refers to the relevant issues. The sacrifice relevant question prepares the examinee for the introduction of the relevant questions. The sacrifice relevant question is always asked in the second position.

Figure C10.F4. Sample of a Sacrifice Relevant Question

Regarding your application forms, do you intend to answer each question truthfully?

C10.3.2.4. Irrelevant Question. The irrelevant is the first question asked during the data collection phase. It may also be asked in other positions in the question string. It is designed to allow the orienting response to habituate before a question that is to be evaluated is asked. The irrelevant question can be used to establish homeostasis when an artifact occurs. Irrelevant questions should be neutral and unrelated to the issue being tested. Irrelevant questions are not numerically evaluated. Several irrelevant questions may be reviewed and used as needed.

Figure C10.F5. Samples of an Irrelevant Question

Are you now in Alabama?  
Do you ever drive a car?

#### C10.4. DATA COLLECTION PHASE

##### C10.4.1. Question String.

C10.4.1.1. Question Format Requirements. The test format should begin with an irrelevant question. Irrelevant questions may be inserted into each question string of this format as needed. A sacrifice relevant question will be included in serial position 2 in the LEPET question format. The initial series may consist of 2 to 4 relevant questions and 1 or 2 series (for a total of 7 relevant questions).

C10.4.1.2. Question String. With the possible exception of irrelevant questions, all questions reviewed during the pretest phase will be asked during the data-collection phase. However, the exact sequence in which the questions are to be asked in the data-collection phase is not revealed. (See figure C10.F6. and C10.F7.)

Figure C10.F6. Sample LEPET Question String: 4RQ

I SR C R C R I C R C R C

Figure C10.F7. Sample LEPET Question String: 3RQ

I SR C R C R I C R C
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C10.4.1.3. Data Collection Phase. The first question string should be asked as indicted in Figures C10.F6-F7. The second presentation of the question string must involve rotating the order of relevant and/or comparison questions. After the first presentation of the question string, subsequent askings should be constructed so that the relevant question displaying the greatest physiological response is adjacent to the comparison question(s) with the greatest physiological response(s). Each relevant question should be bracketed by comparison questions.

C10.4.1.4. Test Data Requirements. In most instances, the collection of three presentations of the relevant questions is appropriate. A fourth presentation of the question string may be conducted if a conclusive opinion cannot be provided after the third chart. The numerical total required for a conclusive opinion remains the same for three, four or five presentations of a relevant question in a single series. All questions that comprise this format will be presented in each question string.

C10.4.2. Conduct of Acquaintance Test. The ACQT should be collected as the first chart of this examination. It is conducted, in part, to acquaint the examinee with the polygraph procedures. The known solution ACQT is the only ACQT recognized in this Guide.

## C10.5. TEST DATA ANALYSIS

C10.5.1. Numerical Analysis. The 3- or 7-position evaluation system may be used to evaluate test data.

C10.5.2. Spot Analysis. Each relevant question within the question string is combined with other questions in the string for evaluation purposes to form what is referred to as a spot. The examiner monitors and evaluates the examinee's responses in these spots.

C10.5.3. Test Data Analysis Procedures.

C10.5.3.1. When comparing relevant and comparison questions, each component tracing is reviewed and compared independently.

C10.5.3.2. The physiological responses of the relevant questions are compared to the greatest physiological responses of the adjacent comparison questions designated by this format.

C10.5.3.3. The examiner should be formally trained with these criteria.

C10.5.4. Opinion Criteria.

C10.5.4.1. Significant Response. To provide an opinion of SR, the numerical score must be minus three (-3) or less in any overall vertical spot. There is no overall horizontal spot total used to provide an opinion as is the case in the ZCT.

C10.5.4.2. No Significant Response. To provide an opinion of NSR, the numerical score must be plus three (+3) or greater in every overall vertical spot.

C10.5.4.3. No Opinion. When based upon an evaluation of the physiological data collected an opinion of SR or NSR cannot be provided, the decision for that series is NO.

Figure C10.F8. Sample of LEPET TDA Opinion Criteria When Examinee is SR

Exam #	Spot I (RQ1)	Spot II (RQ2)	Spot III (RQ3)	Spot IV (RQ4)	Series Opinion	Comments/ Cumulative totals not used
Exam 1	+3	-5	+2	+5	SR	-3 or less at any RQ indicates SR
Exam 2	-3	-2	-4	0	SR	-3 or less at any RQ indicates SR
Exam 3	-3	+3	+6	-4	SR	-3 or less at any RQ indicates SR

Figure C10.F9. Sample of LEPET TDA Opinion Criteria When Examinee is NSR

Exam #	Spot I (RQ1)	Spot II (RQ2)	Spot III (RQ3)	Series Opinion	Comments/ Cumulative totals not used
Exam 1	+3	+3	+4	NSR	+3 or greater in every spot is NSR
Exam 2	+5	+3	+4	NSR	+3 or greater in every spot is NSR
Exam 3	+3	+3	+4	NSR	+3 or greater in every spot is NSR

Figure C10.F10. Samples of LEPET TDA Opinion Criteria When Examinee is NO

Exam #	Spot I (RQ1)	Spot II (RQ2)	Spot III (RQ3)	Series Opinion	Comments/ Cumulative totals not used
Exam 1	-2	+6	+4	NO	-2 at any spot indicates NO
Exam 2	+4	+1	+4	NO	+1 at any spot indicates NO
Exam 3	+1	+2	+3	NO	+1 or +2 in any spot indicates NO

C10.5.5. Administrative Opinions. These opinions reflect the results of a series or an examination that are not based upon physiological responses to the applied stimuli, e.g., when the examinee terminates an examination or is practicing countermeasures. In these instances, administrative opinions such as inconclusive, interrupt, etc., are appropriate.

#### C10.6. QUESTION STRING SAMPLE

Figure C10.F11. Data Collection String LEPET: 1st Series 3RQ Version

I	Are you now in Alabama?
SR	Regarding the accuracy of your application forms, do you intend to answer each
	question truthfully?
C	Prior to 2009, did you ever lie to a family member?
R	Are you withholding information about your involvement with any serious
	crime?
I	Before this application process, did you attend high school?
C	while in high school, did you ever lie to an employer?
R	Are you concealing any illegal drug activity?
C	Did you ever cheat in school?
R	Have you deliberately falsified any information on your application forms?
C	Did you ever betray the trust of a close friend?

## C11. CHAPTER 11

### DIRECTED-LIE COMPARISON TEST (DLCT)

#### C11.1 SCOPE

This guide establishes essential elements for the conduct of the Directed-Lie Comparison Test (DLCT) for participating law enforcement agencies.

#### C11.2 BACKGROUND

The DLCT was first used by the U. S. Army's Military Intelligence polygraph program examiners in the 1960s for the purpose of developing information and resolving intelligence issues. This standardized comparison test is designed to be minimally intrusive. The DLCT employs a format consistent with the Air Force Modified General Question Test (AFMGQT). When using the AFMGQT an equal number of comparison and relevant questions are used so that the test remains balanced. When applying Directed-Lie Comparison (DLC) questions, this format may be administered in law enforcement applicant screening polygraph examinations. The use of DLC questions may not be used for criminal specific issue testing.

#### C11.3 PRETEST PHASE

C11.3.1 Question Review Sequence. The following questions types are used in this format: primary relevant, directed-lie comparison, sacrifice relevant and irrelevant questions; all questions are reviewed with the examinee prior to the collection of test data (see Figure 5E.F1).

Figure C11.F1 Question Review Sequence: DLCT

Sacrifice Relevant (SR) Relevant (R) Directed Lie Comparison (DLC) Irrelevant (I)
--

#### C11.3.2 DLCT QUESTION TYPES

C11.3.2.1 Sacrifice Relevant Question. This is the first question of the DLCT format that refers to the relevant issues, and prepares the examinee for the introduction of the relevant questions. Sacrifice Relevant questions are not numerically evaluated (see Figure 5E.F2).

Figure C11.F2, Sample Sacrifice Relevant Question: DLCT

Regarding the suitability questions, do you intend to answer truthfully? Yes.
---

C11.3.2.2, Primary Relevant Questions. These questions pertain to the suitability topics being investigated. Relevant questions test the possible direct involvement of the examinee (see Figure 5E.F3).

Figure C11.F3 Sample Primary Relevant Questions: Suitability Topics

Are you withholding any information about your involvement in any serious crime? No.  
Are you concealing any illegal drug activity? No.  
Are you deliberately falsifying any information on your application forms? No.

C11.3.2.3 Directed-Lie Comparison (DLC) Question. The DLC question is a specialized comparison question. A properly constructed DLC question involves a minor transgression which should have some personal significance to the examinee. Upon acknowledging having committed such a transgression, the examinee is directed to lie when asked that particular question on the test. The question is separated from the relevant issue by category (see Figure C11.F4).

Figure C11.F4 Sample DLC Questions

Did you ever commit a minor traffic violation? No.  
Did you ever lose your temper? No.

C11.3.2.4 Irrelevant Question. An irrelevant question is the first question asked during the data-collection phase and may also be asked in other positions on the chart. Irrelevant questions are answered truthfully and worded so that the examinee answers “Yes”. Irrelevant questions are used to allow the orienting response to habituate and to reestablish baseline when an artifact occurs on the chart. Irrelevant questions should be unrelated to the issues being tested and are not numerically evaluated. Several irrelevant questions may be reviewed and used as needed (see Figure C11.F5).

Figure C11.F5 Sample Irrelevant Questions

Is today Wednesday? Yes.  
Are you sitting down? Yes.

## C11.4 DATA COLLECTION PHASE

C11.4.1 Question Format. The AFMGQT is the testing format for the DLCT. The AFMGQT format offers flexibility in both initial screening and breakdown testing. Both versions of the AFMGQT may be used for the DLCT. When using the AFMGQT format with the DLCT, there should be an equal number of relevant and comparison questions. The exception is when using Version 2 with 4RQ. In this case only 3 DLC questions are used to bracket the RQs (see Figure 5E.F7). In version 1, with the 4RQ format, the last question is a relevant question and is not bracketed by comparison questions.

C11.4.2 Question Sequence. The question string or sequence depends upon the version chosen. Figure C11.F6 below provides examples of the AFMGQT Versions 1 and 2 when 2, 3,

or 4 relevant questions are needed. Figure C11.F6a illustrates an example of a DLCT question list regarding employment suitability.

Figure C11.F6 Sample Question Strings/Formats: AFMGQT (DLCT)

Version 1	Version 2
I-SR-C-R-C-R-C-R-C-R	I-SR-C-R-R-C-R-R-C
I-SR-C-R-C-R-C-R-C	I-SR-C-R-C-R-R-C
I-SR-C-R-C-R-C	I-SR-C-R-R-C

Figure C11.F6a Sample Question List (Suitability)

1. Are the lights on in this room?
2. Regarding the suitability questions, do you intend to answer each question truthfully?
3. Did you ever lose your temper?
4. Are you withholding any information about your involvement in any serious crime?
5. Did you ever commit a minor traffic violation?
6. Are you concealing any illegal drug activity?
7. Did you ever say anything out of anger that you later regretted?
8. Are you deliberately falsifying any information on your application forms?
9. Did you ever say something derogatory about someone behind their back? (optional)

C11.4.3 Data-Collection Phase. During the second chart, relevant and comparison questions should be asked in a mixed order. The question sequence should be based on a brief global evaluation of the first chart. The relevant question exhibiting the strongest response should be paired with the most responsive DLC questions. The strongest relevant question should not be presented as the first relevant question during subsequent charts. During the third chart, relevant and comparison questions may be asked in a mixed order or in the same sequence as the initial chart, or initial order sequence. These procedures reduce the possibility of responses based upon the examinee's knowledge of the question sequence.

C11.4.4 Chart Requirements. In most instances, the collection of three charts, i.e., three presentations of the relevant questions, is appropriate. A fourth and, if necessary, a fifth chart may be conducted if a conclusive opinion cannot be rendered after the third chart. Under no condition will a sixth chart be collected. The numerical total required for a conclusive opinion remains the same as for a three-chart series. All questions that comprise this format will be presented in each chart collected after the third chart.

C11.4.5 Acquaintance Test (ACQT). The ACQT is the first chart conducted for this examination. It is conducted, in part, to acquaint the examinee with the testing procedures. The ACQT as taught by NCCA should be used.

## C11.5 TEST DATA ANALYSIS

The 3-position or 7-position numerical evaluation system may be used.

## C11.6 OPINION RENDERING CRITERIA

When employing the AFMGQT format, the following decision rules apply:

C11.6.1 Significant Response. To render an opinion of SR, the score must be minus three (-3) or less in any overall vertical spot. There is no overall horizontal spot total used to render an opinion as is the case in the ZCT.

C11.6.2 No Significant Response. To render an opinion of NSR, the numeric score must be plus three (+3) or greater in every overall vertical spot for the AFMGQT.

C11.6.3 No Opinion. If based on physiological responses to the applied stimuli and an opinion of SR or NSR cannot be rendered, the opinion is NO. When appropriate, an administrative opinion should be rendered.

C11.6.4 Administrative Opinions. These opinions reflect the results of a series or an examination that are not based upon physiological responses to the applied stimuli such as when the examinee terminates an examination or is practicing countermeasures. In such instances, administrative opinions such as inconclusive, purposeful non-cooperation, no-opinion-countermeasures, etc., are appropriate.

## C12. CHAPTER 12

### DIRECTED-LIE SCREENING TEST (DLST)

#### C12.1 SCOPE

This guide establishes essential elements for the conduct of the Directed-Lie Screening Test (DLST) for participating law enforcement agencies.

#### C12.2 BACKGROUND

Screening Examinations have been in existence since the 1930's. As information regarding polygraph developed, so did screening methods. In 1971 the United States Army employed the Counterintelligence Screening Test (CIST), which was one of the first screening examinations to use the Directed-Lie Comparison Questions (DLC). In an attempt to increase standardization and reduce target issues, the Federal Government created the Test for Espionage and Sabotage (TES), which is very similar to the Directed Lie Screening Test (DLST). This format may only be used to administer law enforcement applicant screening polygraph examinations. The use of this format may not be used for criminal specific issue testing.

#### C12.3 PRETEST PHASE

C12.3.1 Question Review Sequence. The following questions types are used in this format: primary relevant, directed-lie comparison, sacrifice relevant and irrelevant questions; all questions are reviewed with the examinee prior to the collection of test data (see Figure 5E.F1).

Figure C12.F1 Question Review Sequence: DLST

Sacrifice Relevant (SR) Relevant (R) Directed Lie Comparison (DLC) Irrelevant (I)
--

#### C12.3.2 DLST QUESTION TYPES

C12.3.2.1 Sacrifice Relevant Question. This is the third question of the DLST format that refers to the relevant issues, and prepares the examinee for the introduction of the relevant questions. Both relevant issues must be introduced in the Sacrifice Relevant Question. Sacrifice Relevant questions are not numerically evaluated (see Figure 5E.F2).

Figure C12.F2, Sample Sacrifice Relevant Question: DLST

Do you intend to answer the serious crimes and drugs questions truthfully? Yes.
---

C12.3.2.2, Primary Relevant Questions. These questions pertain to the suitability topics being investigated. Relevant questions test the possible direct involvement of the examinee (see Figure 5E.F3).

Figure C12.F3 Sample Primary Relevant Questions: Suitability Topics

Are you withholding any information about your involvement in any serious crime? No. Are you withholding any information about your involvement in illegal drug activity? No. Are you withholding any information on your application forms? No.
--

C12.3.2.3 Directed-Lie Comparison (DLC) Question. The DLC question is a specialized comparison question. A properly constructed DLC question involves a minor transgression which should have some personal significance to the examinee. Upon acknowledging having committed such a transgression, the examinee is directed to lie when asked that particular question on the test. The question is separated from the relevant issue by category (see Figure C12.F4). It is permitted but not required to begin all DLCs with a common phrase such as “In your entire life”, in order to assist with question recognition.

Figure C12.F4 Sample DLC Questions

Did you ever commit a minor traffic violation? No. Did you ever lose your temper? No.
--

C12.3.2.4 Irrelevant Question. An irrelevant question is the first and second question asked during the data-collection phase and may also be asked in other positions on the chart. Irrelevant questions are answered truthfully and worded so that the examinee answers “Yes”. Irrelevant questions are used to allow the orienting response to habituate and to reestablish baseline when an artifact occurs on the chart. Irrelevant questions should be unrelated to the issues being tested and are not numerically evaluated. Several irrelevant questions may be reviewed and used as needed (see Figure C12.F5).

Figure C12.F5 Sample Irrelevant Questions

Is today Wednesday? Yes. Are you sitting down? Yes.
--

## C12.4 DATA COLLECTION PHASE

C12.4.1 Question Format. The DLST question format is unique, in that it consists of only one chart. The single chart covers 2 relevant issues. Additional relevant issues must be covered in additional series. It is recommended that an examination is limited to 2 series in one session, but 3 series are allowed. Additional tested should be scheduled for a separate session.

C12.4.2 Question Sequence. The question string or sequence for the DLST is highly structured and cannot be altered. It may be extended to allow for a fourth presentation of the relevant issues, as three usable presentations are required. Figure C12.F6a illustrates an example of a DLST question list regarding employment suitability.

Figure C12.F6 Sample Question String/Format (DLST)

I1-I2-SR-1C1-1R1-1R2-1C2-2R1-2R2-2C1-3R1-3R2-2C2
--

Figure C12.F6a illustrates the question string if it is observed that an additional presentation of the relevant issues is required during chart collection.

Figure C12.F6a Sample Question String/Format with fourth presentation (DLST)

I1-I2-SR-1C1-1R1-1R2-1C2-2R1-2R2-2C1-3R1-3R2-2C2-4R1-4R2-3C1
--

Figure C12.F6b illustrates the question string if it is observed that an additional presentation of the relevant issues is required after chart collection. This is referred to as a “Short Chart”.

Figure C12.F6b Sample Question String/Format “Short Chart” (DLST)

I1-I2-SR-2C2-4R1-4R2-3C1
--------------------------

Figure C12.F6c Sample Question List (Suitability)

1. Are the lights on in this room?
2. Are you sitting down?
3. Do you intend to answer the serious crimes and illegal drugs questions truthfully?
4. Have you ever committed a minor traffic violation?
5. Are you withholding any information regarding your involvement in a serious crime?
6. Are you withholding any information regarding your involvement in illegal drug activity?
7. Did you ever say anything out of anger that you later regretted?
8. Are you withholding any information regarding your involvement in a serious crime?
9. Are you withholding any information regarding your involvement in illegal drug activity?
10. Have you ever committed a minor traffic violation?
11. Are you withholding any information regarding your involvement in a serious crime?
12. Are you withholding any information regarding your involvement in illegal drug activity?
13. Did you ever say anything out of anger that you later regretted?

C12.4.3 Data-Collection Phase. During the examination, this question sequence will not be altered, with the exception of inserting an Irrelevant Question to achieve homeostasis.

C12.4.4 Chart Requirements. Three artifact free presentations are required for this examination. In the event a fourth presentation is required, both relevant questions must be asked in an extended chart or “Short Chart”.

C12.4.5 Acquaintance Test (ACQT). The ACQT is the first chart conducted for this examination. It is conducted, in part, to acquaint the examinee with the testing procedures. The ACQT as taught by NCCA should be used.

## C12.5 TEST DATA ANALYSIS

The 3-position or 7-position numerical evaluation system may be used. Only the first three usable presentations of a relevant question will be used for scoring purposes. Relevant questions will be scored against each of the bracketed comparison questions.

## C12.6 OPINION RENDERING CRITERIA

When employing the DLST format, the following decision rules apply:

C12.6.1 Significant Response. To render an opinion of SR, the score must be minus three (-3) or less in any overall vertical spot. An overall score of minus four (-4) is also deemed SR.

C12.6.2 No Significant Response. To render an opinion of NSR the overall score must be a plus four (+4), with each vertical spot totaling at least plus one (+1).

C12.6.3 No Opinion. If based on physiological responses to the applied stimuli and an opinion of SR or NSR cannot be rendered, the opinion is NO. When appropriate, an administrative opinion should be rendered.

C12.6.4 Administrative Opinions. These opinions reflect the results of a series or an examination that are not based upon physiological responses to the applied stimuli such as when the examinee terminates an examination or is practicing countermeasures. In such instances, administrative opinions such as inconclusive, purposeful non-cooperation, no-opinion-countermeasures, etc., are appropriate.

## C13. CHAPTER 13

### CONCEALED INFORMATION TEST (Credibility Assessment (CA) Examination)

#### C13.1 SCOPE

This guide establishes essential elements for the conduct of the Concealed Information Test (CIT) for participating law enforcement agencies.

As the CIT is designed to only evaluate electrodermal responses, the CIT should not be considered a “polygraph” examination. The CIT is considered and should be referred to as a CA examination.

#### C13.2 BACKGROUND

The CIT, also known as the Guilty Knowledge Test (GKT) was developed by David Lykken to assess the presence of concealed knowledge, relative to the elements of a specific criminal incident. It is an examination of the subject’s memory for features of the investigated crime. The CIT is well-researched and is generally accepted within the scientific community. Widespread use of the format, however, is limited by its reliance on salient aspects of an event that would likely be known only to the guilty individual.

#### C13.3 PRETEST PHASE

C13.3.1. Crime-Related Knowledge Statement. During the pretest interview, the examinee is asked to disclose all that is known about the incident. Examiners must be judicious to not reveal potential keys. Any key items mentioned by the examinee during this phase must be excluded from the CIT. Any keys not revealed by the examinee are then available for use in the construction of the test.

Should an examinee state before testing begins that there is no knowledge whatsoever of the event, it may be advisable to ask the examinee to write a statement to that effect. This tactic may dissuade an examinee—following a CIT revealing clear recognition—from attempting to say he or she knew about the item, but failed to disclose it during the pretest.

C13.3.2. Question Review. Next, the question strings are introduced to the examinee. The buffer and key item questions are discussed in the order that they will be presented during the test. As long as each key is mutually exclusive, all keys and buffer items can be reviewed at this juncture.

If the presentation of a subsequent key area will compromise the key of a previous area, then it is necessary to stop the data collection process and review the subsequent key area. This should be accomplished after the data have been collected for the previous key area that was subject to compromise. For example, if one of the keys is regarding what was stolen

(money), a subsequent key (amount of money) would compromise the previous key if reviewed before data collection. The solution is to stop data collection after the “money” series, review the stimuli for the “amount” series, and then resume data collection.

C13.3.3 Stimuli used in the CIT.

C13.3.3.1. Key Item. A key item is a fact about the crime that should be known only to the guilty party, the examiner, and the investigators.

C13.3.3.2. Buffer Items. Buffer items are facts that are similar to the key, and plausible in the context of the incident. Key items must not be unique or stand out in any way. Failure to either develop buffer items that are similar to the key items, or using keys that stand out, can invalidate the CIT.

C13.3.3.3. Preparatory Phrase. This is a statement that presents the crime-related question to which the key is the correct answer. It is only stated once, at the beginning of the question string; it never appears at any subsequent item.

Figure C13.F1. Preparatory Phrase for the First Question of a CIT in a Stabbing Homicide

The person involved in this matter would know what object was used to stab that man.  
Repeat after me...

C13.4. DATA COLLECTION

C13.4.1. Item Sequences. The key item is never placed in the first position of the question string. In addition, the serial position of the key item must be rotated in successive series so that it does not occur in the same position with each series. An example is demonstrated by Figure C13.F2:

Figure C13.F2. Sample Item Sequence for the CIT Using Five Buffer Items per String

String 1	Preparatory Phrase	Buffer	*Key*	Buffer	Buffer	Buffer	Buffer
String 2	Preparatory Phrase	Buffer	Buffer	Buffer	*Key*	Buffer	Buffer
String 3	Preparatory Phrase	Buffer	Buffer	*Key*	Buffer	Buffer	Buffer
String 4	Preparatory Phrase	Buffer	Buffer	Buffer	Buffer	*Key*	Buffer
String 5	Preparatory Phrase	Buffer	Buffer	Buffer	Buffer	Buffer	*Key*

Figure C13.F3. Sample CIT Series

String #1: The person who stole that item would know from which room it was taken.						
Repeat after me:	714	938	297 (key)	584	326	461
String #2: The person who stole that item would know what was taken.						
Repeat after me:	Laptop	Wallet	Cell Phone	Bank Bag	Watch	iPod (key)
String #3: The person who stole that item would know the location from which it was taken.						
Repeat after me:	Closet	Backpack	Briefcase	Cabinet	Desk (key)	Nightstand

C13.4.2. Examinee Verbal Responses to Stimuli. The examinee is instructed to simply repeat the name of each item after the presentation of each buffer and key item. This is done to maintain examinee engagement in the data collection process, to prevent examinee dissociation. The examinee does not repeat the preparatory phrase.

Figure C13.F4. Sample Examinee Verbal Responses During a CIT

Stimulus	Examiner	Examinee
Preparatory Phrase	The person who stole that item would know from which room it was taken. Repeat after me:	(no response)
Buffer	714	714
Buffer	938	938
Key	297	297
Buffer	584	584
Buffer	326	326
Buffer	461	461

C13.4.3. Inter-Question Spacing. The CIT evaluates only the amplitude of the electrodermal responses. Therefore, the customary 20-25 second inter-question spacing is not required. The next item in a string may be presented as soon as the EDA is in homeostasis. Examiners, however, must still be mindful of non-EDA artifacts which might affect the EDA's response.

### C.13.5. TEST DATA ANALYSIS

C.13.5.1. Physiological Channels. While all usual polygraph physiological channels are collected during the CIT process, only the electrodermal channel is used for scoring purposes.

C.13.5.2. Score Assignment. The amplitudes of the electrodermal responses to each buffer item and the key item are considered in the decision process, with the exception of the buffer item that is in the first position. The first buffer item is always excluded because of the potential for an orienting response to the initial item in the sequence. If the key elicits the largest reaction, then a score of two is assigned to that test sequence. If the key elicits the second largest reaction, then a score of one is assigned. If the key produces less than the largest or second largest response, no score is assigned. The scores for all test sequences are then added to produce the final total.

C.13.5.3. Opinion Rendering Criteria. The final total score produced across all test sequences is then compared to the number of test sequences presented to the examinee. A final total score equal to, or greater than, the number of test sequences presented indicates that the examinee possesses undisclosed knowledge of the incident.

C.13.5.3.1. For administrative purposes, an opinion of “Recognition Indicated” (RI) indicates that the final total equals or exceeds the number of test sequences, and that the examinee has probably concealed information. An opinion of “No Recognition Indicated” (NRI) indicates that the final total is less than the number of test sequences, and there is insufficient evidence of concealed knowledge on the part of the examinee. An NRI opinion does not mean the examinee had no involvement in the incident. A culpable examinee may produce an NRI opinion, for example, when the examinee does not recall a sufficient number of key items to produce a higher score.

Figure C.13.F5. Sample Final Totals and Decisions

Number of Test Sequences	Final Total	Decision
5	6	RI
5	5	RI
5	4	NRI
4	8	RI
4	3	NRI
4	4	RI
3	5	RI
3	1	NRI
3	3	RI

C14. CHAPTER 14  
COUNTERMEASURES

C14.1. SCOPE

This Guide establishes the essential elements for implementing polygraph practices where indications of polygraph countermeasures (CM) are observed.

C14.2. BACKGROUND

Reports of countermeasures date to the earliest use of polygraph testing. Countermeasures are deliberate attempts by an examinee to affect the outcome of an examination. The practices in this Guide are supported through research and are being taught at NCCA.

C14.3. PROCEDURES

C14.3.1. Pretest Phase.

C14.3.1.1. An examiner should, in a non-accusatory manner, elicit information from the examinee during the pretest interview regarding the examinee's knowledge of the polygraph process. This should include any prior exposure to polygraph procedures.

C14.3.1.2. To avoid suggesting countermeasure options to an examinee or creating an outside issue, it is not appropriate to routinely discuss specific countermeasures during the pretest interview

C14.3.2. Data Collection. When countermeasures are suspected, polygraph testing should routinely continue until the testing protocol has been completed--usually the collection of test data involving three question strings (charts). Completion of the test series may allow for sufficient physiological data to identify patterns necessary to establish or refute the employment of countermeasures.

C14.3.2.1. When an examiner suspects countermeasures were employed, the examiner may conduct specialized polygraph tests designed to confirm the presence of countermeasures. Examiners may not use a countermeasure question (i.e., "Have you done anything to defeat this test?") in a series containing relevant questions pertaining to the original testing issue.

C14.3.2.2. Specialized tests are to be used solely in determining whether countermeasures were employed. No conclusion or opinion as to the truthfulness of the original testing issue may be reached based on a countermeasures test series.

### C14.3.3. Employment of Movement Sensor Device(s) (MSD).

C14.3.3.1. The MSD is designed to detect covert movements during a polygraph examination.

C14.3.3.2. When available the MSD should be used.

C14.3.3.3. When the MSD is employed, sensitivity/gain settings for the component should be adjusted to allow for optimum tracings.

C14.3.4. Introduction of the MSD. A brief introduction of the MSD should be made during the polygraph process.

C14.3.5. MSD Evaluation Procedures. The timing and frequency of atypical responses are a consideration when attempting to identify the existence of countermeasures during a polygraph examination. The analysis of the frequency and timing of these atypical patterns affords an opportunity to compute probability estimates regarding the likelihood of such patterns having occurred by chance alone, or conversely, to determine whether they are deliberate and tactical.

C14.3.6. MSD Training. Examiners should receive sufficient training with the MSD to ensure the examiner is proficient in the use of the device and in interpreting data collected.

### C14.3.7. Opinions.

C14.3.7.1. A significant response or deception indicated decision may only be made in the presence of countermeasures when sufficient uncontaminated data supports such a decision.

C14.3.7.2. An opinion of no significant response (NSR) or no deception indicated (DI) shall not be made for a test series in the presence of countermeasures.

C14.3.7.3. An opinion of no opinion (NO) may be appropriate when data is contaminated by countermeasures. The continued lack of cooperation by an examinee employing countermeasures may be administratively reported in an opinion such as Purposeful Non-Cooperation (PNC).

## C14.4. COUNTERMEASURES TRAINING

C14.4.1. All examiners should receive initial formal countermeasures training within one year after completing their internship.

C14.4.2. Examiners should receive refresher instruction in countermeasures every two years.

## C15. CHAPTER 15

### POLYGRAPH EXAMINER QUALIFICATIONS: TRAINING, INTERNSHIP AND PROFICIENCY

#### C15.1. TRAINING

C15.1.1. An examiner must complete initial polygraph training at an APA accredited school. The curriculum of the APA accredited school should be of such length and content to qualify the examiner for membership with AAPP.

#### C15.1.2. Broad Objectives of Polygraph Training.

C15.1.2.1. Produce polygraph examiners who possess in-depth knowledge and experience in polygraph to support the law enforcement (LE) community they serve.

C15.1.2.2. The examiner should be competent to conduct polygraph examinations in accordance with the practices established in this Guide.

#### C15.2. INTERNSHIP

C15.2.1. Upon successful completion of initial polygraph training the graduate should undergo an agency internship.

C15.2.1.1. The intern period should consist of a minimum of six months and should not exceed 18 months.

C15.2.1.2. The intern should be monitored by an agency examiner or a senior examiner trained in the polygraph procedures adopted by PLEA.

C15.2.1.3. The intern should be monitored on-site until the polygraph program manager or agency representative determines the intern has demonstrated sufficient proficiency to conduct examinations through off-site monitoring. Monitoring should consist of:

C15.2.1.3.1. A review of the issue for which the examination is to be conducted between the monitor and the intern prior to the examination. Guidance should be provided to the intern as appropriate.

C15.2.1.3.2. A review of all test questions to be asked during the examination by the monitor before the conduct of the examination.

C15.2.1.3.3. A QC of the test data by the monitor immediately after the test data is collected.

C15.2.1.4. A minimum of 25 examinations should be accomplished before an intern examiner may be awarded examiner status.

### C15.3. EXAMINER PROFICIENCY

C15.3.1. To maintain examiner status with an agency, the examiner must maintain polygraph proficiency.

C15.3.1.1. The proficiency of an examiner is determined by the supervisor of the polygraph unit.

C15.3.1.2. When an examiner consistently demonstrates an inability or unwillingness to conduct examinations within agency policy or in accordance with the procedures established in this Guide, the supervisor should take appropriate action either to retrain the examiner or decertification.

C15.3.1.3. Unethical conduct should result in the decertification of the offending examiner.

### C15.4. CONTINUING EDUCATION

C15.4.1. Examiners should undergo continuing education of at least 30 hours every two calendar years.

C15.4.2. Polygraph Continuing Education (CE) records should be maintained for a minimum of 3 years.

## APPENDIX A

### TEST QUESTION CONSTRUCTION SAMPLES

#### 1. HOMICIDE (Shooting)

##### Sacrifice Relevant Questions:

- Regarding the shooting of James, do you intend to answer each question truthfully?
- Regarding the shooting of that man, do you intend to answer each question truthfully?
- Regarding whether or not you shot James, do you intend to answer each question truthfully? (This version of the sacrifice relevant question is used in the You-Phase ZCT)

##### Primary Relevant Questions:

- Did you shoot James that night?
- Did you shoot that man while he was sitting in that car?
- Did you shoot that man?

##### Secondary Relevant Questions:

- Did you handle that gun that night?
- Did you plan with anyone to shoot James?
- Do you know (for sure) who shot James that night?
- Did Jeremy tell you he shot James that night?
- Were you present when that man was shot
- Did you participate in that shooting?
- Did you go to Oak Grove High School that night?
- Did you lend your car to anyone that night?
- Do you know who was driving your car the night of the shooting?

##### Comparison Questions:

- As a teenager, did you ever hurt a loved one?
- While in prison, did you ever intentionally hurt anyone?
- While living in New York City, did you ever lie to get out of trouble?
- Before turning eighteen, did you ever get so angry you wanted to hurt someone you cared for?
- While in the Army, did you ever deliberately harm another person?
- Have you ever told a lie to someone who loves and trusts you?
- Before this year, did you ever lie about something important?

APPN. A.2. HOMICIDE (Unknown cause of Death)

Sacrifice Relevant Questions:

- Regarding the death of that woman, do you intend to answer each question truthfully?
- Regarding the death of Anna, do you intend to answer each question truthfully?

Primary Relevant Questions:

- Did you cause the death of that woman?

Secondary Relevant Questions:

- Did you touch that woman in the woods?
- Did you participate in any way in the death of that woman?
- Did you take any of that money from that woman's purse?
- Did you handle that woman's purse in those woods?

Comparison Questions:

- Prior to the year 2002, did you ever hurt anyone?
- Prior to 2002, did you ever hurt anyone who trusted you?
- Prior to your \_\_\_\_ birthday, did you ever lie about something serious?
- Prior to 2002, did you ever lie to get out of trouble?

### APPN. A.3. FORCIBLE RAPE

#### Sacrifice Relevant Questions:

- Regarding sexual intercourse with that woman, do you intend to answer each question truthfully?
- Regarding sexual intercourse with Alice, do you intend to answer each question truthfully?

#### Primary Relevant Questions:

- Did you force that woman to have sexual intercourse?
- Did you place your penis into Alice's vagina against her will?
- Did Alice repeatedly tell you that she did not want to have sex with you that night?
- Did you place your penis into Alice's vagina without her consent?

#### Secondary Relevant Questions:

- Did you slap Alice that night?
- Did you tear that woman's dress?
- Did you force Alice into that truck?

#### Comparison Questions:

- Prior to the year 2002, did you ever attempt to force your intentions on someone (else)?
- Prior to the age of \_\_\_\_\_, did you ever lie about your sexual activities?
- Before this year, did you ever commit a sex act you are ashamed of?
- Before arriving in VA, did you ever lie to a family member?
- Since reaching adulthood, did you ever engage in a sex act that most people would consider abnormal?
- While in Colorado, did you ever lie to an authority figure?
- Before this year, did you ever lie about a sex act?
- As a teenager, did you ever commit an unnatural sex act?

#### APPN. A.4. DATE RAPE

##### Sacrifice Relevant Questions:

- Regarding sexual intercourse with that woman, do you intend to answer each question truthfully?
- Regarding sexual intercourse with Terri, do you intend to answer each question truthfully?

##### Primary Relevant Questions:

- Did Terri tell you she did not want to have sexual intercourse with you that night?
- Did you have sexual intercourse with that woman without her consent?
- Did you place your penis inside Terri's vagina against her will?

##### Secondary Relevant Questions:

- Did you throw Terri down on that bed that night?
- Did Terri cry in front of you that night?
- Did you choke Terri in that hotel room?

##### Comparison Questions:

- Prior to the year 2002, did you ever lie about a sex act?
- Before this year, did you ever lie to get out of trouble?
- Before your \_\_\_\_ birthday, did you ever lie to someone who loved you?
- Prior to this year, did you ever perform an unnatural sex act?
- Since becoming an adult, did you ever view pornography?
- While living in West Virginia, did you ever perform a sex act that most people would be ashamed of?

## APPN. A.5. ARSON INVESTIGATION

### Sacrifice Relevant Question:

- Regarding starting the fire in that warehouse, do you intend to answer each question truthfully?

### Primary Relevant Questions:

- Did you start that fire at Tom's Pizza?
- Did you set that fire at Tom's Pizza?
- Are you the person who set the fire at Tom's Pizza?
- Was the fire at Tom's Pizza started by you?

### Secondary Relevant Questions:

- Were you inside Tom's Pizza the night that fire was started?
- Did you plan with anyone to set the fire at Tom's Pizza?
- Did you move any of those wooden crates in Tom's Pizza that night?
- Did you participate in setting the fire at Tom's Pizza?
- Do you know what accelerant was used to start the fire?

### Comparison Questions:

- Prior to the year 2002, did you ever damage anything?
- Before your \_\_\_\_\_ birthday, did you lie to get out of trouble?
- Before 2002, did you ever damage any private property?
- Before arriving in SC, have you ever damaged something that did not belong to you?
- Since your first job, have you ever lied on a job application?
- Prior to 2005, have you ever damaged something that did not belong to you?

## APPN. A.6. LARCENY

### Sacrifice Relevant Question:

- Regarding the stealing of that computer equipment, do you intend to answer each question truthfully?

### Primary Relevant Questions:

- Did you steal any of that (computer) equipment?
- Are you the person who stole any of that computer equipment?

### Secondary Relevant Questions:

- Did you remove any of that computer equipment from that closet on Friday?
- Do you know where any of that computer equipment was disposed of?
- Did you participate in stealing any of that (computer) equipment?

### Comparison Questions:

- Prior to the year 2002, did you ever steal anything?
- Between the ages of \_\_\_ and \_\_\_, did you ever lie to get out of serious trouble?
- Prior to your \_\_\_ birthday, did you ever steal anything from a place you worked?
- Before arriving in SC, did you ever lie to a person in authority?

## APPN. A.7. TERRORIST ACTS

### Sacrifice Relevant Question:

- Regarding those envelopes containing Anthrax, do you intend to answer each question truthfully?

### Primary Relevant Questions:

- Did you mail any of those envelopes containing anthrax?
- Are you the person who mailed that anthrax?

### Secondary Relevant Questions:

- Did you place anthrax into any of those envelopes?
- Do you know (for sure) who mailed any of those envelopes containing that anthrax?
- Did you participate in mailing any of that anthrax?
- Do you know who made any of that anthrax?
- Did you plan with anyone to mail any of that anthrax?

### Comparison Questions:

- Before the year 2002, did you ever hurt anyone?
- Prior to the year 2002, did you ever lie about something important?
- Between the ages of \_\_\_\_ and \_\_\_\_, did you ever lie about hurting anyone?
- Before this year, did you ever lie to a loved one?

## APPENDIX B

### DEFINITIONS AND TERMS

Acquaintance Test (referred to as an ACQT): A question format that is a form of the known solution peak of tension test. It is utilized to demonstrate and acquaint the examinee with the basic concepts of the polygraph examination. The primary purpose of this test is to assure the examinee that the polygraph process is effective.

Administrative Opinion: An opinion that reflects the results of a series or an examination that is not based upon physiological responses to the applied stimuli, such as when the examinee terminates an examination or when the examinee is practicing countermeasures. In these instances, administrative opinions such as inconclusive, purposeful non-cooperation, incomplete, interrupted, etc., are appropriate.

Anti-Countermeasures: Those procedures routinely included in the examination protocol to deter or neutralize countermeasures (referred to as CMs).

Artifact: A change in a physiological pattern not attributable to a stimulus question or recovery.

Bracketed Relevant Questions: The procedure wherein comparison questions are placed adjacent to or in close proximity to a relevant question for the purpose of comparing physiological responses.

Cardiovascular Tracing: The display of physiological patterns of the subject's relative blood volume and pulse rate. The cardiograph component records this activity.

Chart: A graphic representation containing selected physiological data generated by an examinee during the data collection phase of a polygraph examination.

Comparison Question: A question that is designed for the truthful person to produce physiological responses. The physiological responses of comparison questions are compared to physiological responses of relevant questions.

Counter-Countermeasures: Procedures invoked when CM are suspected; they are used to defeat or confirm the presence of CM.

Countermeasures: Strategies used by examinees to affect polygraph testing by the intentional employment of physical, mental, pharmacological, or behavioral efforts.

Deception Indicated (referred to as DI): A decision based on polygraph testing in specific issue examinations in which analysis of the physiological responses to a relevant question identified consistent, significant, and timely responses to at least one relevant question. DI indicates the examinee is not being truthful to an issue addressed.

Electrodermal Tracing: The display of physiological patterns of either skin resistance or skin conductance obtained through exosomatic recording with a galvanograph component.

Examiner Certification: Certification indicates a LE agency or department considers the examiner is proficient in polygraph procedures and has met all qualifications and training requirements to conduct polygraph examinations for that department. Only designated examiners, examiners being recertified, or intern examiners under the supervision of an agency certified examiner are authorized to conduct polygraph examinations under the auspices of that agency.

Examiner Internship: Polygraph training and mentorship provided to polygraph examiner candidates. Internship is normally 6-18 months in length. During this time, the intern conducts twenty-five (25) polygraph examinations under the supervision and guidance of a senior certified examiner.

Forensic Psychophysiological Detection of Deception: The science that deals with the relationship and applications of polygraph tests within the legal system. It is the academic discipline that provides the student, the practitioner, and the researcher with the theoretical and applied psychological, physiological, and psychophysiological fundamentals for a thorough understanding of polygraph tests, and the skills and qualifications for conducting polygraph examinations. The modifier "forensic" delineates and delimits this discipline from the broader discipline of psychophysiology.

Homeostasis: A complex interactive regulatory system by which the body strives to maintain a state of internal equilibrium.

Irrelevant Question: A question that is designed to be non-emotion evoking and unrelated to the issue being tested.

No Deception Indicated (referred to as NDI): A decision based on polygraph testing in a specific issue examination in which analysis of the physiological responses did not identify sufficient consistent, significant, and timely responses to a relevant question. NDI indicates the examinee was being truthful to the issue addressed.

No Opinion (referred to as NO): A decision based on polygraph testing in screening or specific issue testing wherein analysis of the physiological responses did not identify responses to the questions addressed that would support an opinion as to the truthfulness of the examinee. NO indicates additional testing is necessary to provide a conclusive opinion.

No Significant Response (NSR): A decision based on polygraph testing in screening examinations in which analysis of the physiological responses did not identify sufficient consistent, significant, and timely responses to any relevant question. NSR indicates the examinee successfully completed that series of testing for that phase of the polygraph examination.

Polygraph Examination: A process that encompasses all activities that take place between an examiner and an examinee during a specific series of interactions. These interactions include the pretest interview, the use of the polygraph instrument to collect physiological data, the test data analysis phase, and the post-test phase.

Polygraph Examiner: Someone who has successfully completed formal education and training in conducting polygraph examinations and is certified by their agency to conduct such examinations.

Polygraph File: The file in which all polygraph reports, technical documents, test data and related documents should be maintained.

Polygraph Instrument: A diagnostic instrument used during a polygraph examination that is capable of monitoring, recording and/or measuring at a minimum, respiratory, electrodermal, and cardiovascular activity as a response to verbal or visual stimuli.

Polygraph Law Enforcement Accreditation (PLEA): The PLEA is a program established to develop and implement standardized polygraph procedures used by federal, state, and local LE agencies. The PLEA standards are the basis for the voluntary oversight inspection process wherein a participating agency, upon successfully completing the inspection process, is accredited.

Probable Lie Comparison (PLC) Question: This question is designed to be a probable-lie for the examinee. The PLC question should be similar in nature but unrelated by time, place or category to the specific issue. However, in screening examinations the PLC can be related to the issue(s) as long as the screening comparison question establishes a dichotomy between the relevant and comparison issues (separated from the issue by category). A comparison question should be broad in scope and time so that it captures as many of the examinee's past life experiences as possible. The physiological responses to the PLC are compared to the responses of the designated relevant questions.

Polygraph Report: A document containing at least identifying data of the examinee, a synopsis of the basis for which the polygraph examination was conducted, the relevant questions utilized, and the examiner's conclusion.

Psychological Set: The significance of responses to a test question is a function of the relative salience of the test question to the examinee. The difference in the arousal between relevant and comparison questions for deceptive and truthful examinees results from the varying degrees of importance/concern placed on those questions by the examinee. For example, the deceptive examinee would direct attention to the relevant question(s) that should cause the greatest degree of concern/importance resulting in the greatest physiological response to one or more relevant question.

Question Series: A set of question strings presented in a designated order based upon the questioning format applied. Either one or multiple askings of a question string may comprise a polygraph examination depending in part on the question format applied.

Question String: A set of questions designed to be presented during the in-test phase of a polygraph examination. The serial position and type of question used is based upon the polygraph question format applied (ZCT, AFMGQT, etc.).

Question Format: The structure, type and sequence of questions asked during a question string represents the different polygraph questioning formats. The physiological responses to the questions asked according to the protocol for the format is the basis upon which a polygraph opinion is provided.

Recovery: A deviation in a tracing attributable to a physiological phenomenon occurring as a compensatory action after a response or an artifact.

Relevant Question: A question that pertains directly to the matter under investigation or to the issue(s) for which the examinee is being tested.

Respiratory Tracing: The display of physiological patterns indicative of the examinee's breathing activity as recorded by the pneumograph component.

Response: Phasic physiological changes to the applied stimulus.

Sacrifice Relevant Question: A question that prepares the examinee for the introduction of the relevant questions.

Security Information Database: A national repository for substantive intelligence gleaned during polygraph examinations conducted within the federal, state, and local law enforcement communities. Under the auspices of the FBI, the SID is maintained within the Law Enforcement Online (LEO) internet portal. The objective of the system is to strengthen and improve government information sharing.

Series: Routinely a series will consist of three or four presentations of a question string.

Significant Response (SR): A decision resulting from polygraph testing in screening examinations in which analysis of the physiological responses identified consistent, significant, and timely responses to at least one relevant question. The opinion provided would be that the examinee had not successfully completed that series of testing for that phase of the polygraph examination.

Specific Issue Polygraph Examination: A polygraph examination conducted to resolve a specific issue, e.g., rape, robbery, homicide, etc.

Spot Analysis: The procedure wherein the tracing of a component is separately evaluated by comparing the response of a relevant question to the responses of one or two comparison questions. The relevant and comparison questions are designated for comparison based upon the question format used.

Symptomatic Question: A question that is designed to test for an outside issue that could be more significant for an examinee than the issues being tested.

Technical Questions: A specifically designed question posed to an examinee during the data collection phase of a polygraph examination. Test questions are designed to maximize differences in the elicited response patterns between truthful and deceptive examinees. There are several types of test questions used within the LE polygraph community.

Test Data: The signal of interest (tracings) may consist of unwanted noise, artifacts (distortions), recovery, or physiological responses of the examinee to stimuli.

Test Data Analysis: The analysis of the physiological responses (test data) recorded by the polygraph instrument (may be referred to as tracings). Only test data that is timely with the applied stimulus (questions) and free of artifacts and unwanted noise on the signal can be evaluated.