



**FEDERAL  
PSYCHOPHYSIOLOGICAL DETECTION OF  
DECEPTION  
EXAMINER HANDBOOK**

COUNTERINTELLIGENCE FIELD ACTIVITY TECHNICAL MANUAL  
October 2, 2006

## FOREWORD

This manual is issued under the authority of DoD Directive 5210.48, DoD Polygraph Program. Its purpose is to prescribe uniform Psychophysiological Detection of Deception (PDD/polygraph) procedures. The provisions of this manual are effective immediately and apply to those DoD elements that use PDD, and by agreement to other federal law enforcement, counterintelligence, and security agencies that also use PDD procedures.

Procedures and formats prescribed herein are based upon the requirements of the Components and of the federal agencies with established polygraph programs.

This manual is mandatory for use by all of the Components and those federal agencies participating in the Quality Assurance Program. Heads of the Component organizations may issue supplementary instructions only when necessary to provide for unique requirements in support of their respective missions.

This update supersedes the September 12, 2005, version of the Handbook. The modifications to this technical manual were completed in accordance with paragraph C.1.3.2., below.

*Original signed by*  
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## ACRONYMS AND ABBREVIATIONS

<u>TERM</u>	<u>ACRONYM/ABBREVIATION</u>
Acquaintance Test	ACQT
Comparison Test Format	CTF
Counterintelligence Scope Polygraph	CSP
Counterintelligence Screening PDD	CSP
Deception Indicated	DI
Department of Defense Polygraph Institute	DoDPI
Directed-Lie Comparison	DLC
Exclusionary Comparison Question	ECQ
Federal PDD Examiner Handbook	Handbook
Modified General Question Test	MGQT
No Deception Indicated	NDI
No Opinion	NO
No Significant Response	NSR
Peak of Tension	POT
Plan of Instruction	POI
Probable-Lie Comparison	PLC
Psychophysiological Detection of Deception	PDD
Quality Assurance Program	QAP
Quality Control	QC
Rank Order Scoring System	ROSS
Relevant/Irrelevant	R/I
Screening Comparison Question	SCQ
Searching Peak of Tension	SPOT
Significant Response	SR
Test for Espionage and Sabotage	TES
United States Army Military Police School	USAMPS
Zone Comparison Test	ZCT

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## DEFINITIONS AND TERMS

Acquaintance Test (ACQT): A questioning 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 PDD examination. The primary purpose of this test is to assure the examinee that the PDD process is effective.

Administrative Opinion: Opinions that 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 when the examinee is practicing countermeasures. In these instances, administrative opinions such as inconclusive, purposeful non-cooperation, etc., are appropriate.

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.

Breakdown Test: A test conducted to verify an examinee's statement regarding an issue after specific responses to one question have been observed and recorded during a screening examination. The issue is separated from the remaining test questions and a breakdown test is conducted. To devise appropriate breakdown questions, divide the issue into its logical components and design a question to cover each key area. The breakdown test can be conducted using an R/I format, or a comparison question format. If the results of the breakdown test clear the issue for which the test was conducted, a clearing test should be conducted.

Cardiovascular Tracing: The display of physiological patterns of the subject's relative blood volume and pulse rate. The cardiograph component records this activity. The criteria used to evaluate this component are: change in baseline, change in amplitude and change in rate.

Certification Process: Personnel authorized to conduct PDD examinations will be certified by each agency. The agency certifies that the examiner has met and maintains all qualifications and training requirements. Only fully certified examiners, examiners being recertified, or intern examiners under the supervision of a certified examiner are authorized to conduct PDD examinations.

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

Clearing Test: A test that is utilized in the R/I format after a breakdown test. The clearing test is made up of the remaining relevant test questions that were not covered in the breakdown test. The test will not contain any questions dealing with the issue covered in the breakdown. The

relevant questions asked on the clearing test must be asked a minimum of two times with no artifacts or significant physiological responses for an NSR decision.

Comparison Question: A question that is designed to produce a physiological response. The physiological responses of the comparison questions are compared to the physiological responses of the relevant questions. The probable and directed lie are the two types of comparison questions utilized within the federal government.

Counterintelligence Scope PDD Examination: A limited scope screening examination administered to detect and deter espionage, security breaches, sabotage, or other acts against the federal government.

Deception Indicated (DI): An opinion which indicates that an analysis of the PDD charts revealed the physiological responses to the relevant question(s) were indicative of deception.

Directed Lie Comparison (DLC) Question: A specialized comparison question addressing a minor transgression to which most people will readily admit. Upon acknowledging having committed such a transgression, the examinee is directed to lie when asked that question on the test.

Electrodermal Tracing: The display of physiological patterns of either skin resistance or skin conductance obtained through exosomatic recording with a galvanograph component. The criteria considered when evaluating this component are change in amplitude, complexity of the response, and duration of the response.

Examiner Internship: Upon successful completion of the PDD training course, each candidate will serve an internship. This internship will be a minimum of six months and usually will not exceed twelve months. During this time, the intern will conduct at least twenty-five (25) PDD examinations under the direct supervision and guidance of a senior certified examiner.

Exclusionary Comparison Question (ECQ): A probable-lie question should be similar in nature but unrelated to the issue being tested. The question should be separated from the relevant issue by time, place or category. The comparison question should use the same action verb or similar in nature action verb as that of 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.

Expanded Scope PDD Examination: A personnel security screening PDD examination whose relevant questions usually address involvement in serious crime, illegal drugs, falsification of forms, as well as the counterintelligence scope questions.

Field Rank Order Scoring System: A version of the ROSS that is an optional method of evaluating R/I counterintelligence scope PDD examinations, sometimes referred to as the "High Three."

Forensic Psychophysiological Detection of Deception: The science that deals with the relationship and applications of PDD 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 PDD tests, and the skills and qualifications for conducting PDD examinations. The modifier "forensic" delineates and delimits this discipline from the broader discipline of psychophysiology.

Global Test Data Analysis: A system of rendering an opinion by viewing the PDD chart as a whole, as opposed to making systematic comparisons among questions. This approach does not employ the use of numerical values. This method is used primarily in the relevant/irrelevant and peak of tension question formats.

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.

Math Question: A stimulus question that involves the unrehearsed presentation of a simple arithmetic problem.

No Deception Indicated (NDI): An opinion that indicates that an analysis of the PDD charts revealed the physiological responses to the relevant question(s) were not indicative of deception.

No Opinion (NO): An evaluation which indicates the examiner cannot render an opinion based upon the physiological data on the charts.

No Significant Response (NSR): This opinion indicates that the analysis of the PDD charts revealed no consistent, significant, timely, physiological responses to the relevant questions in personnel screening, source validation, or POT tests.

Overall Truth Question: An optional question which may be utilized in an R/I question format. It is similar to the sacrifice relevant question in the comparison question format. It is intended to elicit a physiological response that may be indicative of the examinee's overall response capability.

Personnel Security Screening (PSS) PDD Examination: A PDD screening examination conducted to aid in determining an individual's eligibility for initial or continued access to designated programs or information, or an examination conducted to aid in determining an individual's eligibility for initial access to sensitive law enforcement positions.

Polygraph Instrument: A diagnostic instrument used during a PDD 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.

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. 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. The exclusionary and screening comparison questions are the two types of PLC questions used within the federal government.

Psychological Set: A specific application of set theory regarding the focus of attentional resources and the preparation of responses. In psychology, set is defined as a temporary orientation or state of preparedness toward a particular stimulus.

Psychophysiological Detection of Deception (PDD): 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 PDD tests, and the skills and qualifications for conducting PDD examinations.

PDD Anti-Countermeasures (ACM): Those procedures routinely included in the examination protocol to deter or neutralize CM.

PDD Counter-Countermeasures (CCM): Those procedures invoked only when CM are suspected and are used to defeat them or confirm their presence.

PDD Countermeasures (CM): Those strategies by examinees to affect PDD testing by the intentional employment of physical, mental, pharmacological, or behavioral efforts.

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

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

PDD File: The file in which all PDD reports, technical documents, charts and related documents should be maintained until properly disposed.

PDD Report: A PDD document that may contain identifying data of the examinee, a synopsis of the basis for which the examination was conducted, the relevant questions utilized, and the examiner's conclusion.

PDD Series: The collection of the required PDD chart(s) for a particular testing format.

Rank Order Scoring System (ROSS): A scoring system that ranks the questions on the charts from greatest to least responsiveness. In ROSS, each physiological parameter, i.e., respiration,

electrodermal, and cardiovascular, is evaluated separately. ROSS provides the examiner with a cumulative picture of the consistent, significant and timely responses on the PDD charts. This method of evaluation is used primarily to evaluate relevant/irrelevant questioning formats.

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. Evaluation criteria considered are changes in amplitude, changes in rate, changes in baseline, loss of baseline and apnea.

Response: The physiological change to the applied stimulus which can either be phasic or tonic.

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

Screening Comparison Question (SCQ): The SCQ question should be similar in nature or motivation as the primary relevant issue being tested and one to which the examinee will lie or be doubtful as to the accuracy of the answer. The SCQ topic should be broader in scope and of lesser import than the relevant issue. These questions allow the examinee to make a clear dichotomy between the relevant and SCQ as established by a thorough pretest explanation. The SCQ is used only for CSP or full scope polygraph issue examinations. The SCQ may be used for both initial and breakdown series.

Significant Response (SR): An opinion which indicates that the analysis of the PDD charts revealed consistent, significant, timely physiological responses to the relevant questions in personnel screening, source validation, or POT tests.

Specific Issue PDD Examination: A PDD examination conducted to resolve a specific issue, e.g., criminal, espionage, sabotage, or source validation.

Spot Analysis: The procedure wherein each component tracing is separately evaluated by comparing the response of a relevant question to the response of a comparison question.

Stimulus Question: A question that may be utilized in an R/I question format to determine the examinee's overall capacity for response.

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 (Test) Questions: A specifically designed question posed to an examinee during the data collection phase of a PDD 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 PDD.

Test Data: The signal of interest that may consist of unwanted noise, artifact, recovery, or psychophysiological responses of the examinee in response to stimuli.

Test Data Analysis: The analysis of the psychophysiological responses recorded on the PDD charts. Only data that is timely with the applied stimulus and free of artifacts and unwanted noise on the signal can be evaluated.

## C1. CHAPTER 1

### INTRODUCTION

#### C1.1. CONCEPT OF FEDERAL PSYCHOPHYSIOLOGICAL DETECTION OF DECEPTION

Psychophysiological Detection of Deception is accepted as a valuable forensic application within the Federal Government. As with any discipline, established, standardized methodologies must be implemented to assure proper application. The procedures in this Handbook detail PDD standards as taught by DODPI. To ensure standardization consistent with the unique requirements of individual agencies, procedures should be followed as closely as operational requirements allow. These standards will help to ensure the PDD discipline is used in the most professional manner possible while maintaining an effective investigative aid.

#### C1.2. SCOPE

Nothing in the handbook or the referenced guidelines should be construed to limit the authority of individual agency heads to manage their PDD programs in the manner best suited to their individual agencies. Failure to abide by any or all parts of the Handbook shall not give rise to any claim cognizable in a court of law. The Handbook is intended only to improve the internal management of Federal PDD programs. It is not intended and does not create any right to administrative or judicial review, or any other right, or benefit, or trust, responsibility, substantive or procedurals enforceable by a party against the United States, its agencies or instrumentalities, its officers or employees, or any other person.

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

C1.3.1. Agency heads should establish procedures for the supervision of PDD programs to ensure the highest ethical, professional, and technical standards. General principles for PDD examinations are contained in the Handbook.

C1.3.2. Requests to modify the Handbook should be made through the Director, DoDPI. Requests received by the director will be forwarded for review at a meeting of the Federal PDD program managers. If a consensus opinion accepting the modification is achieved, the modification will be added to the Handbook.

## C2. CHAPTER 2

### QUALITY CONTROL

#### C2.1. SCOPE

This guide establishes the essential elements for quality control within the Federal Government.

#### C2.2. BACKGROUND

In order to develop minimum standards for the conduct of QC within the Federal Government, the PDD program managers and the Department of Defense Polygraph Institute established the Quality Assurance Working Group which developed the basis for these QC standards.

#### C2.3. ADMINISTRATION OF QUALITY CONTROL

C2.3.1. Quality Control Program. Each agency within the Federal Government with a PDD capability shall maintain a QC program or obtain a cooperative agreement with another Federal agency which has an adequate existing QC program.

C2.3.2. Technical Supervision of Examiners. Quality Control procedures for the technical supervision of PDD examiners should ensure ethical, professional, and technical standards are maintained.

C2.3.3. Quality Control Supervision. The QC of PDD examinations should be under the supervision of the PDD program manager.

C2.3.4. Quality Control Personnel. Quality Control procedures should only be accomplished by designated, experienced, certified PDD examiners.

C2.3.4.1. Personnel assigned responsibilities of QC should have a minimum of two years' experience as a PDD examiner.

C2.3.4.2. Quality Control personnel should have a grade level commensurate with their authority, responsibility, and technical abilities.

C2.3.4.3. Quality Control personnel should have technical authority over PDD examiners and should have input into their performance ratings.

C2.3.5. Centralized Quality Control. To ensure consistent implementation of agency policy, QC procedures should be as centralized as possible.

#### C2.4. QC PROCEDURES

C2.4.1. Operating Procedures. Each agency should have standard operating procedures for the conduct of its QC program.

C2.4.2. Independent and Objective Quality Control. Quality Control procedures shall be independent and objective without undue influence of the original examiner or other sources.

C2.4.3. Quality Control Review. All PDD reports, technical documents, and charts shall undergo a QC review to ensure satisfactory tracing quality and correctness of opinion rendered.

C2.4.4. Quality Control Authority. Quality Control should have the authority to direct reexamination.

C2.4.5. Examination Results. Agency policy should be established to ensure that the results of an examination are not considered final until the examination has been subjected to the agency's QC program.

C2.4.6. Quality Control Review Indicated. Each PDD file should indicate that a QC review of the examination has been completed.

## C2.5. PDD APPROVAL PROCEDURES

C2.5.1. Approval Authority. Each agency will identify those persons authorized to approve the conduct of a PDD examination. The approval authority within each agency should be as centralized as possible. All PDD examinations should be approved prior to being conducted.

C2.5.2. Accounting Procedures. An accounting procedure for the approval and conduct of specific issue PDD examinations that are requested individually should be established.

C2.5.3. Approval of Personnel Screening Examinations. Personnel screening examinations are authorized by public law, directive, regulation, and agency policy.

### C3. CHAPTER 3

#### QUALITY ASSURANCE PROCEDURES

##### C3.1. SCOPE

This guide establishes the essential elements for quality assurance oversight within the Federal Government.

##### C3.2. BACKGROUND

In order to implement Federal minimum quality assurance standards, Federal PDD program managers and DoDPI developed the QAP.

##### C3.3. RESPONSIBILITIES

The DoDPI is responsible for maintaining a QAP. The QAP should inspect the procedures of all Federal PDD agencies to ensure ethical, professional, and technical standards are maintained.

##### C3.4. STANDARDS

Quality Assurance Program inspections will be based upon the standards established in the Handbook and the policies and procedures established by the inspected agency. The scope of an inspection may be expanded only upon a request from the inspected agency. The scope of an expanded inspection shall be agreed upon beforehand with the program manager.

##### C3.5. INSPECTION FORMAT

C3.5.1. Inspection Pre-briefing. The QAP will brief agency QC personnel at least 30 days prior to their scheduled inspection date. During this pre-briefing, the areas to be inspected and the scope of the inspection will be addressed.

C3.5.2. On-site Inspection. Inspections will involve an on-site inspection of agency QC procedures, interviews of agency personnel, and a review of policies, procedures, and statistics. A detailed review of a representative sample of PDD examinations will be completed to ascertain adherence to these standards. This review when appropriate will entail a thorough review of PDD reports, technical documents, charts, and allied documents.

C3.5.3. Exit Briefing. At the completion of the on-site inspection by the QAP, a draft report will be provided to the agency during an exit briefing.

##### C3.6. INSPECTION REPORT

C3.6.1. Response to Recommendations. A final report of inspection will be forwarded to the supervisor of the PDD program manager. The inspected agency shall respond in writing to the Director, DoDPI to recommendations noted in the final inspection report.

C3.6.2. Final Disposition-Concur. In those instances wherein the QAP and the inspected agency concur that all recommendations have been satisfied, the compliance with these standards will be attested to in writing by the Director, DoDPI.

C3.6.3. Final Disposition-Non-concur. In those instances in which the QAP and the inspected agency do not concur on the findings of the inspection, the issues of disagreement will be forwarded through the Director, DoDPI to the program manager's supervisor.

### C3.7. REINSPECTION

When necessary, a re-inspection will occur within approximately six months unless specifically declined by the agency.

### C3.8. BIENNIAL INSPECTIONS

The QAP will inspect the PDD program QC procedures of each Federal PDD agency biennially.

### C3.9. PERSONNEL

Personnel assigned to the QAP will be experienced criminal investigators and/or security professionals/special agents trained in counterintelligence matters. Criminal investigators will be experienced in conducting criminal specific issue examinations, and counterintelligence/security personnel will be experienced in conducting screening and other intelligence-related examinations. Personnel will be experienced certified PDD examiners with a minimum of five years' PDD experience with at least two years' QC or supervisory experience.

### C3.10. BRIEFINGS FOR NEWLY ASSIGNED POLYGRAPH PROGRAM SUPERVISORS

Within 30 to 90 days after an agency designates a new polygraph program manager or a new senior quality control supervisor, QAP personnel will conduct a briefing with the newly assigned official regarding federal polygraph policies and the QAP inspection process. The briefing is designed for the senior polygraph supervisor of each agency.

## C4. CHAPTER 4

### EDUCATION GUIDELINES

#### C4.1. INTRODUCTION

C4.1.1. Core Curriculum. This curriculum represents the standards for the education and training of federal Psychophysiological Detection of Deception (PDD) examiners; therefore, federal PDD examiners will receive their initial PDD training at DoDPI.

C4.1.1.1. The PDD Program curriculum will be composed of a core program and clinical laboratory activities.

C4.1.1.2. All PDD students will be required to take the core curriculum described below. The two important aspects of the core curriculum are the traditional classroom work and the clinical laboratory activities during which the student applies the knowledge gained in the classroom.

#### C4.1.2. PDD Program Curriculum Concept

C4.1.2.1. A PDD curriculum will emphasize those enduring educational principles held in common with all institutions of higher learning to produce the highest quality graduate for the government's polygraph programs. The government has a vital need for broadly educated and intellectually equipped examiners to effectively and competently engage PDD processes to resolve complex and important cases for national security and criminal justice. Advancing technologies along with research findings in psychology and physiology have afforded new methods and insights for today's PDD examiner, advances that are reflected in the evolution of the DoDPI curriculum.

C4.1.2.2. Inevitable resource constraints in the years immediately ahead mandate that the United States achieve maximum efficiency regarding investigations and security concerns within all agencies. The PDD Program curriculum will be configured to meet these two converging concerns by providing a superior quality graduate-level education in PDD to ensure competency when utilizing the government's most effective credibility assessment technology.

C4.1.2.3. A PDD curriculum should build on its historical foundation and progress in concert with advancements in forensic psychophysiology, continually evolving and improving to further the missions of the customer agencies.

C4.1.2.4. The PDD Program curriculum shall, when practical, conform to the standards set by the DoDPI Executive Committee, professional polygraph associations, and the appropriate academic accreditation agency. The DoDPI will continue to pursue accreditation through an accreditation agency recognized by the US Department of Education.

### C4.1.3. Interdisciplinary Approach to Curriculum

C4.1.3.1. A PDD curriculum will be both multidisciplinary and interdisciplinary. It will contain a core program, a scientific research component, and a clinical aspect.

C4.1.3.2. Each part of the curriculum will be based on the intricate interplay of the parent disciplines—including forensic science, the legal system, physiology, and psychology.

C4.1.3.3. The academic program will engage the student in a variety of teaching methodologies including seminars, individual study, research, clinical practica, and group exercises.

C4.1.3.4. Multiple assessment techniques, including written examinations and laboratory performance evaluations, will be employed to evaluate student comprehension and achievement.

## C4.2. PDD CURRICULUM OBJECTIVES

### C4.2.1. Broad Objectives

C4.2.1.1. Produce educated forensic psychophysiologyists who possess in-depth knowledge and experience in PDD to serve as senior military and career civil service special agents. The examiner should be competent to conduct valid examinations and make effective decision and policies regarding PDD applications in a complex, rapidly changing national security environment.

C4.2.1.2. Educate, inform, and influence the national security community, the scientific community, and the legal community with regard to the science of forensic psychophysiology.

C4.2.1.3. Remain the nation's premier educational and research institution in the area of forensic psychophysiology, with special emphasis on learning resource material acquisition, to remain the nation's foremost repository of knowledge and expertise on the subject.

C4.2.1.4. Develop and retain a nationally prominent faculty which grows in tandem with advanced educational and research systems and adapt the curriculum to reflect an ever-evolving science.

### C4.2.2. Learning Objectives

C4.2.2.1. Understand critical theories, concepts, and principles related to PDD.

C4.2.2.2. Apply these theories, concepts, and principles through the conduct of PDD examinations that address a wide range of issues, both specific and general in nature, regarding criminal, intelligence, counterintelligence (CI), and screening situations.

C4.2.2.3. Analyze physiological data to identify patterns of arousal on which valid inferences of deception, truthfulness, or concealed knowledge can be based.

C4.2.2.4. Synthesize a broad range of theories and concepts suggested from research material, lectures, and other acquired knowledge; think critically and creatively about the relevance and applicability of the ideas, and formulate effective strategies and examination approaches to address national security, criminal, intelligence, and CI issues.

C4.2.2.5. Incorporate ethical considerations, evaluate the propriety of various alternative methodology designed to address national security, criminal, and intelligence issues, and defend decisions regarding the selection or rejection of alternatives.

C4.2.2.6. Participate effectively in laboratory practica and live field applications of various PDD approaches in which learned theories, concepts, and principles are utilized in solving problems and making decisions.

C4.2.2.7. Demonstrate professional-level competency and capability in forensic psychophysiology through technical application, oral presentation, and written communication.

### C4.3. PDD PROGRAM CURRICULUM

Credit Hours for the PDD Program - One semester hour of credit equals at a minimum, 15 classroom hours of lecture, 30 hours of laboratory, or 45 hours of practica.

#### C4.3.1. PDD 501 - Interviewing Techniques

4 Semester Hours - Interviewing skills facilitate and complement the PDD process from the pre-test development of suitable test questions to the post-test discussion of the examination results. Through class lecture and live exercises, this course provides the student examiner with a foundation for building rapport with examinees and preparing them for testing. Dependent on the testing format utilized, students are taught how to encourage self-report of behaviors relevant to the test issues. Students learn to become sensitive to nonverbal cues, tailoring their approach according to individual characteristics, and consider cultural aspects that may pertain to an examinee. Several methods of pre-test and post-test interviews are presented to students who practice them under field-like conditions in mock crime scenarios.

#### C4.3.2. PDD 502 - PDD Analysis

2 Semester Hours – In this course students study the theory of PDD test questions and stimuli and practical aspects of their construction based upon the case investigative analysis. The students are acquainted with the use and purpose of all types of interrogatives utilized in specific issue and expanded CI screening PDD examinations. The various types of relevant questions utilized in specific issue and expanded CI examinations are discussed in detail. The students are acquainted with categories of comparison questions authorized for most major crime specific issue and expanded CI examinations. They will then learn how to formulate the most appropriate comparison questions based upon an examinee's personal history and the tested relevant issue for all DoDPI specific issue PDD formats.

#### C4.3.3. PDD 503 - PDD Analysis II

2 Semester Hours - This course presents the DoDPI Three- and Seven-Position Numerical Evaluation Scoring System. It prepares the student examiner to recognize and evaluate physiological phenomena or diagnostic features in each of the PDD recording channels. The decision rules for various PDD testing formats are presented and the means for rendering a diagnostic opinion are taught. Using the knowledge gained in Physiology #501 and Psychology #501, the student examiner gains a greater understanding and appreciation for the interrelationship between physiology, psychology, and PDD.

#### C4.3.4. PDD 504 - PDD Methods

2 Semester Hours - This course provides the student with historical aspects of PDD from the crude methods of detecting deception during the days of the Inquisition to the present. The student examiner is acquainted with early pioneers of PDD who had a tremendous influence in the development of physiological research leading to the development of modern-day sensors and PDD instrumentation. They also become familiar with significant personalities who had an impact on the development of PDD testing formats. Beginning with the early 1900s and leading up to present day, the student is presented with information about significant and high profile cases having a profound affect on modern PDD practices.

The student is exposed to PDD instrumentation ranging from traditional analog instrumentation to proper utilization and operation of present day computerized polygraph systems (hardware) and associated software programs. The student is taught acquaintance test protocols (ACQT); selected intelligence and screening PDD formats (TES, LEPET, and R/I Screening); Specific Issue R/I PDD format procedures and operational methodologies currently being taught at DoDPI.

#### C4.3.5. PDD 505 - PDD Methods II

2 Semester Hours - This course acquaints the student with specific-issue PDD testing formats utilized within the Federal Government. It also introduces the student examiner to types of mental, physical, and pharmacological countermeasures that might be encountered in PDD testing and provides counter-countermeasures an examiner might utilize to neutralize these countermeasures. The course provides insight into the use of interpreters in conducting PDD examinations of an examinee whose primary language capability is something other than what the examiner possesses. Additionally, the relationship is explored between the field examiner and quality control aspects of their work to ensure that adequate standards and controls are maintained.

#### C4.3.6. PDD 506 - PDD Laboratory

4 Semester Hours - Students are introduced to state-of-the-art instrumentation. Hands-on experience with examinees enables students to apply the principles, theory, and methodology gleaned from their studies of PDD to simulated law enforcement and CI scenarios. Students are graded on their ability to utilize, interpret, analyze, and evaluate specific PDD methods of investigation.

#### C4.3.7. PDD 507 - Field Familiarization Laboratory

1 Semester Hour - This course familiarizes the student examiner with field applications of PDD formats and testing techniques. Under the auspices of a representative from the students' parent organization and with the coordination of DoDPI faculty, student examiners conduct PDD examinations and evaluations utilizing their agency's PDD formats and procedures.

#### C4.3.8. PHY 501 - Physiology of PDD

4 Semester Hours - This course integrates an in-depth knowledge and understanding of the major human physiological systems as they pertain to the clinical applications of PDD. Emphasis is placed on the integrated functions of the nervous, cardiovascular, respiratory, and integument systems, with attention given to the skeletal and muscular systems. Special attention is placed on the physiology of the neuron resting and action potentials, synaptic transmission, sensory and motor pathways, brain lateralization, and autonomic nervous system modulation. Cardiovascular and respiratory system dynamics are described with an emphasis on neural integration. Eccrine gland dynamics and its innervations is the focal point of the integument system. The physiological dynamics of this systemic approach to human body function are described with respect to PDD assessment.

#### C4.3.9. PSY 501- Psychology of PDD

3 Semester Hours - The psychological theories and processes underlying human behavior and its relationship to PDD are examined. Topics include sensation, perception, human learning, memory, cognition, motivation, emotion, stress, personality, psychological disorders, social processes, and social psychology. All topics covered will be developed specifically with respect to their relevance to the PDD process. In addition, topics of relevance will be developed in relation to causes and explanations for criminal behavior. Finally, psychological concepts relevant to extraction and retention of information of criminal incidents as perceived by eyewitnesses will be addressed.

#### C4.3.10. RES 501- Research Theories and Issues

1 Semester Hour - This course exposes the student examiner to research theories and issues of PDD. Students are acquainted with scientific research terminology and the procedures for conducting laboratory and field PDD research. They are provided with information on the relative merits of the different types of PDD research. Through assigned readings and individual

research, students are expected to recognize and articulate differences between scientific and unscientific PDD research.

#### C4.3.11. LAW 501- Legal and Ethical Aspects of PDD

1 Semester Hour - This course is designed to acquaint the student examiner with ethical and legal issues affecting PDD. During the ethics portion, the student is furnished information and practical dilemmas in an effort to acquaint them with situations they may be confronted with in field PDD procedures. The students are also exposed to various readings and may be required to research an ethical issue on a current PDD situation. During the legal aspects of PDD, the students are provided case law on PDD issues and the Federal court systems. Additionally, the student examiner is provided information on the legal and technical applications involved in qualifying as an expert witness for PDD issues that the courts have articulated through their various decisions.

#### C4.4. FACULTY

##### C4.4.1. Faculty Composition

C4.4.1.1. Instructor positions will be employed full-time. Adjunct faculty members may be used to augment the full-time faculty.

C4.4.1.2. All instructors will have a minimum of a baccalaureate degree from an accredited university. At least 50 percent of the instructors will have an advanced degree in a discipline related to the field of PDD.

C4.4.1.3. Instructors in ethics and law, psychology, and physiology will have a doctoral degree in their particular area of instruction or be under the supervision of a faculty member holding that degree.

##### C4.4.2. Faculty Organization

C4.4.2.1. DoDPI will be organized around a core faculty to ensure continuity, stability, and scholarly substance for the curriculum.

C4.4.2.2. With the exception of adjunct faculty members, the Director and/or Chief of Instruction will have direct input into the evaluations of all faculty members.

C4.4.2.3. Because the quality of an institution of higher learning can be no greater than the quality of its faculty, the school will develop a multifaceted approach to faculty development to attract and retain high-quality members.

C4.4.2.4. Faculty members will be encouraged to participate in the full range of professional associations and to do extensive outreach activities with federal agencies and other professional groups.

C4.4.2.5. All faculty members will receive 40 hours of formal training in instructional methods prior to being certified as instructors.

#### C4.5. LEARNING RESOURCES

##### C4.5.1. Library

C4.5.1.1. The library's collection will be multidisciplinary in nature. It will include publications concerning psychology, physiology, education, criminal justice, CI, espionage, terrorism, polygraph issues, ethics and law.

C4.5.1.2. The collection will contain relevant journals and periodicals to provide the most up-to-date information available on the subject matter taught at the Institute. This includes periodicals published by polygraph professional organizations.

##### C4.5.2. Information Technology

C4.5.2.1. Access to the Internet and electronic access to bibliographic records, book listings, and periodicals relating to PDD will be available to students.

C4.5.2.2. Laboratory instruction will be enhanced by the presence of closed circuit television, pan and tilt cameras, audio and video recording capability and voice communications between the monitoring room and the polygraph suite. DoDPI will possess a minimum of one computerized polygraph instrument for every two students.

C4.5.2.3. Classroom instruction will be supported through the acquisition of educational technology such as video monitors, computerized slide projectors, electronic blackboards, audio and video recording capability and desktop computers for the students.

#### C4.6. ADMISSION REQUIREMENTS

##### Student Candidate Requirements:

C4.6.1. US citizenship.

C4.6.2. At least 25 years' of age.

C4.6.3. Earned baccalaureate degree from a regionally accredited four-year college or university.

C4.6.4. At least two years' experience as an investigator with a U.S. Federal Government agency, Department of Defense agency, or local or state law enforcement agency.

C4.6.5. High moral character and sound emotional temperament based on a background investigation.

C4.6.6. Judged suitable for the position after taking a PDD examination to ensure that the candidate fully realizes the impact of such an examination. This examination shall be given before the beginning of the PDD Program.

C4.7. FEDERAL POLYGRAPH CONTINUING EDUCATION CERTIFICATION PROGRAM (FPCECP)

C4.7.1. Purpose: Subsequent to the completion of the PDD Program, it is essential that graduates have available a broad variety of continuing education (CE) opportunities. The purpose of the FPCECP is to standardize CE requirements and establish a centralized location for reporting, recording, reviewing, assessing, and certifying CE received by federal PDD examiners.

C4.7.2. Requirement: In accordance with the FPCECP, examiners will earn a minimum of 80 hours of credible education every two years.

## C5. CHAPTER 5

### TEST QUESTION CONSTRUCTION

#### C5.1. SCOPE

This guide establishes essential elements for test question construction for the Federal Government as taught by DoDPI.

#### C5.2. BACKGROUND

A test question is a specifically designed sentence posed to an examinee during the data collection phase of a PDD 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 in PDD testing.

#### C5.3. QUESTION TYPES

C5.3.1. 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 PDD test formats. The following guidelines provide the generally recognized process by which a relevant question should be constructed. Relevant questions should:

C5.3.1.1. Be clear and concise.

C5.3.1.2. Avoid legal terms when possible.

C5.3.1.3. Be constructed so that they may be answered yes or no.

C5.3.1.4. Not be worded in the form of an accusation or contain an inference that presupposes knowledge or guilt.

C5.3.1.5. 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?"

C5.3.1.6. In specific issue tests, only address one issue in each question.

C5.3.1.7. In specific issue tests, only address one incident in each series.

C5.3.2. Primary Relevant. This question tests the possible direct involvement of the examinee. In PDD screening questioning formats, all relevant questions are considered primary relevant questions.

C5.3.3. Secondary Relevant. This question tests the examinee's possible involvement in the offense under investigation. A secondary relevant question should be constructed to address a

secondary issue such as help, plan, or participate; test for secondary involvement in, such as seeing, hearing, or knowing; or focus on the nature or location of evidence and/or physical acts that support the primary offense. There are three types of secondary relevant questions:

C5.3.3.1. Evidence-Connecting. An evidence-connecting question is designed to determine if the examinee was involved with any of the evidence of the crime or is aware of the nature or location of various items of evidence. (See figure C5.F1.)

Figure C5.F1. Sample of an Evidence-Connecting Relevant Question

Do you know where any of that money is now?

C5.3.3.2. Guilty-Knowledge. A guilty-knowledge relevant question is used to determine if the examinee has any knowledge of who committed the incident under investigation. (See figure C5.F2.)

Figure C5.F2. Samples of Guilty-Knowledge Relevant Questions

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

C5.3.3.3. Secondary-Involvement. A secondary-involvement relevant question tests for secondary involvement such as seeing or hearing or focuses on physical acts that support the primary offense. (See figure C5.F3.)

Figure C5.F3. Sample of a Secondary-Involvement Relevant Question

Did you participate in the theft of any of that money?

C5.3.4. 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. The probable lie and directed lie questions are the two types of comparison questions used within the Federal Government.

C5.3.4.1. Probable-Lie Comparison 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. 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. The exclusionary and screening comparison questions are the two types of PLC questions used within the federal government. (See figure C5.F4.)

Figure C5.F4. Sample of a Probable-Lie Comparison Question

Theft issue: Before 1997, did you ever steal anything?

C5.3.4.1.1. **Exclusionary Comparison Question (ECQ).** A probable-lie question should be similar in nature but unrelated to the issue being tested. The question should be separated from the relevant issue by time, place or category. The comparison question should use the same action verb or similar in nature action verb as that of 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. (See figure C5.F5.)

Figure C5.F5. Sample of an Exclusionary Comparison Question Involving Shoplifting

Before this year, did you ever steal anything from someone who trusted you?

C5.3.4.1.2. **Screening Comparison Question (SCQ).** The SCQ question should be similar in nature or motivation as the primary relevant issue being tested and one to which the examinee will lie or be doubtful as to the accuracy of the answer. The SCQ topic should be broader in scope and of lesser import than the relevant issue. These questions allow the examinee to make a clear dichotomy between the relevant and SCQ as established by a thorough pretest explanation. The SCQ is used only for CSP or full scope polygraph issue examinations. The SCQ may be used for both initial and breakdown series. (See figures C5.F6. and C5.F7.)

Figure C5.F6. Sample of a Screening Comparison Question Involving a CI Topic

Have you ever talked around classified information over the telephone?

Figure C5.F7. Sample of a Screening Comparison Question Involving a Suitability Topic

Have you ever done anything academically dishonest?

C5.3.4.2. **Directed-Lie Comparison.** 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 question on the test. The question is separated from the relevant issue by category. (See figure C5.F8.)

Figure C5.F8. Sample of a Directed-Lie Comparison Question

Did you ever commit a minor traffic violation?

C5.3.5. **Sacrifice Relevant Question.** When used, 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 scored during the test data analysis phase of a PDD examination. (See figure C5.F9.)

Figure C5.F9. Samples of Sacrifice Relevant Questions

Regarding whether you stole that car, do you intend to answer truthfully each question about that? (You-Phase ZCT)  
Regarding the theft of that car, do you intend to answer each question truthfully?

C5.3.6. **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

question responses are evaluated, though not numerically scored, during the test data analysis phase of a PDD examination. (See figure C5.F10.)

Figure C5.F10. Samples of Symptomatic Questions

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

C5.3.7. Irrelevant Questions in Comparison Question Formats. The irrelevant question is the first question asked during the data collection phase. It may also be asked in other positions on the chart. It is designed to allow the orienting response to habituate before a scoreable question is asked, and it can be used to establish homeostasis when an artifact occurs on the chart. Irrelevant questions should be unrelated to the issue being tested. Irrelevant questions are not scored. Several irrelevant questions may be reviewed and used as needed. (See figure C5.F11.)

Figure C5.F11. Samples of Irrelevant Questions

Are you now in Alabama?  
Are you sometimes called Tom?

C5.3.8. Irrelevant Questions in Relevant/Irrelevant Formats. In R/I formats the irrelevant question is designed to allow the orienting response to habituate before a relevant question is asked and, as well, has special applications in the R/I question format. They are designed to be neutral but should appear to be meaningful to the examinee. Irrelevant questions should be non-emotion evoking and unrelated to the issue under investigation. Several irrelevant questions may be reviewed and used as needed. Irrelevant questions are not scored against relevant test questions during the data analysis phase. (See figure C5.F12.)

Figure C5.F12. Samples of Irrelevant Questions in Relevant/Irrelevant Formats

Is today Friday?  
Are you now in Alabama?  
Do you live in MD?

C5.3.9. Overall Truth Question. This is an optional question which may be used in an R/I question format. It is similar to the sacrifice relevant question in comparison question formats. It is intended to elicit a physiological response which may be indicative of the examinee's overall response capability. This question may be asked near the beginning and/or at the end of a PDD chart. (See figure C5.F13.)

Figure C5.F13. Samples of Overall Truth Questions

Do you intend to answer truthfully all of the questions on this test?  
Have you truthfully answered all of the questions on this test?

C5.3.10. Stimulus Question. This question is an optional question which may be used in an R/I question format to determine the examinee's overall capacity for response. It is only used when the examinee exhibits a consistent lack of response. The two types of stimulus questions taught by DoDPI are the math and the specific issue R/I stimulus questions. The specific issue R/I stimulus question is used only in the specific issue R/I format.

C5.3.10.1. Math Question. The examinee is told that a math question may be asked during the examination but the exact wording of the question is not reviewed. (See figure C5.F14.)

Figure C5.F14. Samples of a Math Question

Does $10 + 9 = 19$ ?
Does $7 + 5 = 12$ ?

C5.3.10.2. Specific Issue Relevant/Irrelevant Stimulus Question. This question is used to determine the examinee's overall capacity for response. It is used primarily when the examinee exhibits a consistent lack of response. When used in this R/I format, the stimulus question can be directed at specific thoughts, beliefs, or actions of the examinee as it relates to the issue under investigation. Responses to stimulus questions will not be used as comparison questions. (See figure C5.F15.)

Figure C5.F15. Sample of a Specific Issue Relevant/Irrelevant Stimulus Question

Were you on that bridge that night?
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## C6. CHAPTER 6

### TEST DATA ANALYSIS

#### C6.1. SCOPE

C6.1.1. This guide establishes essential elements for test data analysis for the Federal Government as taught by DoDPI.

C6.1.2. The physiological recordings which comprise a PDD examination are addressed in this standard. The respiratory, electrodermal, and cardiovascular are the three currently accepted channels for collecting PDD data.

#### C6.2. BACKGROUND

C6.2.1. Relevant/Irrelevant. The R/I test data analysis process was in large part developed by Leonard Keeler. The basic tenants of that evaluation process were adopted by DoDPI from USAMPS and were subsequently adopted by agencies of the Federal Government.

C6.2.2. Numerical Test Data Analysis. The numerical evaluation procedure in large part was developed by Cleve Backster. A variation of that procedure was adopted by USAMPS, DoDPI, and subsequently used by agencies of the Federal Government.

#### C6.3. TEST DATA ANALYSIS

C6.3.1. Evaluation Procedures. There are four methods used to analyze PDD test data in the Federal Government: the 3- and 7-position numerical evaluation procedures, global test data analysis, and the rank order scoring system (ROSS). In the 3- and 7-position scales, numerical values are assigned to the test data. Global test data analysis does not utilize a numerical system. ROSS may be used to help support conclusions based on a global analysis of the R/I test technique. While scoring methods differ, the evaluation criteria used in analyzing the data collected on the charts are standard among each method.

C6.3.2. Numerical Evaluation. The 3- and 7-position numerical evaluation procedures are used to evaluate comparison question formats. The responses to the relevant questions are compared to the responses at the comparison questions. For the 3-position scale, 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 appear to have no apparent difference in magnitude. An "A" is assigned when the question is unable to be evaluated due to artifacts. For the 7-position scale, numerical values ranging from plus three (+3) to minus three (-3) are assigned to each independent physiological tracing at each relevant test question position.

C6.3.3. Global Analysis. This analysis method is a system of rendering an opinion by viewing the PDD chart as a whole. This approach does not employ the use of numerical values.

This method is used in R/I and peak of tension question formats. Since there are no comparison questions in this technique, the presence or absence of responses to a question is compared with the rest of the chart tracings in their entirety.

C6.3.4. Rank Order Scoring System. The method ranks the questions on the charts from greatest to least responsiveness. In ROSS, each physiological parameter, i.e., respiration, electrodermal, and cardiovascular, is evaluated separately and provides the examiner with a cumulative picture of the consistent, significant, and timely responses on the PDD charts. This method of evaluation is used primarily to evaluate the R/I questioning formats. The Field Rank Order Scoring System, a version of the ROSS adopted in this Handbook, identifies the three most responsive presentations during a series.

C6.3.5. Evaluative Criteria. Only data that is timely with the applied stimulus and free of artifacts and noise on the signal of interest can be evaluated. What is evaluated is the response or lack thereof when a stimulus is applied by the examiner. The PDD test data consists of the signal of interest 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 20 to 25 seconds from onset of applied stimulus should be maintained throughout the examination.

C6.3.6. Evaluation Criteria for Each Component. Only that physiological criteria taught by DoDPI will be used to evaluate test data.

C6.3.7. Test Data Analysis Opinions. The following opinions are those that may be rendered when sufficient test data is collected during a PDD examination: deception indicated (DI), significant responses (SR), no deception indicated (NDI), no significant responses (NSR), no opinion (NO).

C6.3.7.1. Opinions of DI and NDI are appropriate in a specific issue series.

C6.3.7.2. Opinions of NSR and SR are appropriate in screening examinations.

C6.3.8. 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, etc., are appropriate.

## C7. CHAPTER 7

### ACQUAINTANCE TEST

#### C7.1. SCOPE

This guide establishes essential elements for the conduct of the ACQT for the Federal Government as taught by DoDPI.

#### C7.2. BACKGROUND

C7.2.1. The ACQT, as taught by DoDPI, is a form of the known-solution POT test, and is used to demonstrate the basic concepts of PDD to an examinee. The primary purpose of the ACQT is to assure the examinee that the PDD process is effective for that individual. The ACQT should also reinforce the concept of psychological set for the examinee.

C7.2.2. The ACQT is referred to as an acquaintance test since it is administered in part to acquaint the examinee with PDD procedures. A known-solution ACQT is the only type of ACQT taught by DoDPI.

#### C7.3. PRETEST PHASE

C7.3.1. Question Review. During the pretest phase, the fact that an ACQT will be conducted is mentioned. ACQT questions are reviewed prior to the test being conducted.

##### C7.3.2. Questions Used in the ACQT

C7.3.2.1. The Key. This represents the number chosen by the examinee.

C7.3.2.2. Padding Questions. These questions are placed before and after the key number and consist of questions relating to the other numbers on the test.

C7.3.2.3. 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. (See figure C7.F1.)

Figure C7.F1. Sample of a Preparatory Phrase

Regarding the number you wrote ....

C7.3.2.4. Prefix Phrase. This is the prefix to each of the questions. (See figure C7.F2.)

Figure C7.F2. Sample of a Prefix Phrase

Was it number.....

## C7.4. DATA COLLECTION

### C7.4.1. Question Sequence (See figure C7.F3.)

Figure C2.F3. Sample of an Acquaintance Test Question Sequence

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

C7.4.2. Format Procedures. The ACQT is conducted in a mini-PDD format. It consists of a pretest interview, data collection phase, data analysis phase, and post-test interview. This PDD process should reassure the non-deceptive examinee and stimulate the deceptive examinee.

C7.4.2.1. A visual stimulus is used in the ACQT to insure the examinee knows the sequence of the examination and the location of the selected key.

C7.4.2.2. All questions are worded to elicit a no answer.

## C7.5. TEST DATA ANALYSIS

Evaluation Process. The ACQT is not evaluated numerically. It is evaluated utilizing the test data analysis procedures for the POT as taught by DoDPI.

## C8. CHAPTER 8

### ZONE COMPARISON TEST

#### C8.1. SCOPE

This guide establishes essential elements for the conduct of the ZCT for the Federal Government as taught by DoDPI.

#### C8.2. BACKGROUND

The ZCT was designed by Cleve Backster, and a variation of that format was subsequently adopted by USAMPS in 1961. The ZCT as taught by DoDPI has changed little from the original Backster testing format.

#### C8.3. PRETEST PHASE

C8.3.1. Question Review. During the pretest interview, all ZCT questions are reviewed with the examinee prior to the collection of charts. (See figure C8.F1.)

Figure C8.F1. Question Review Sequence

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

#### C8.3.2. Questions Used in the ZCT

C8.3.2.1. 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. (See figure C8.F2.)

Figure C8.F2. Samples of the Primary Relevant Questions in the Zone Comparison Test

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?
--

C8.3.2.2. Secondary Relevant. This question tests the examinee's secondary involvement in or guilty knowledge of the offense under investigation. The secondary relevant question is R10. Under no circumstance should question R10 be a primary relevant question. (See figure C8.F3.)

Figure C8.F3. Samples of Secondary Relevant Questions

Did you help steal that Mustang?  
Do you know how that car was disposed of?  
Do you know for sure who stole that Mustang?  
Did you plan with anyone to steal that Mustang?

C8.3.2.3. Probable-Lie Comparison 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. 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. The exclusionary and screening comparison questions are the two types of PLC questions used within the federal government. (See figure C8.F4.)

Figure C8.F4. Sample of a Probable-Lie Comparison Question

Theft issue: Before 1997, did you ever steal anything of value?

C8.3.2.4. 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. (See figure C8.F5.)

Figure C8.F5. Sample of a Sacrifice Relevant Question

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

C8.3.2.5. Irrelevant Question. The irrelevant question is the first question asked during the data collection phase. It may also be asked in other positions on the chart. It is designed to allow the orienting response to habituate before a scoreable question is asked, and it can be used to establish homeostasis when an artifact occurs on the chart. Irrelevant questions should be unrelated to the issue being tested. Irrelevant questions are not scored. Several irrelevant questions may be reviewed and used as needed. (See figure C8.F6.)

Figure C8.F6. Samples of Irrelevant Questions

Are you now in Alabama?  
Are you sometimes called Tom?

C8.3.2.6. 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. Responses to symptomatic questions are not scored during the test data analysis phase of a PDD examination. Symptomatic questions are always questions #3 and #8 on the ZCT. (See figure C8.F7.)

Figure C8.F7. Samples of Symptomatic Questions

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?

## C8.4. DATA COLLECTION

C8.4.1. Question Sequence. 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. (See figure C8.F8.)

Figure C8.F8. Data Collection Question Sequencing

I	Are you sometimes called Mike?
SR	Regarding that stolen money, do you intend to answer each question truthfully?
SYM	Do you believe I will only ask you the questions we reviewed?
C	Prior to 1996, did you ever steal anything from someone who trusted you?
R	Did you steal any of that money?
C	Prior to coming to Alabama, did you ever steal anything?
R	Did you steal any of that money from Jones' footlocker?
SYM	Is there something else you are afraid I will ask you a question about?
C	Prior to this year, did you ever steal anything from an employer?
R	Do you know where any of that stolen money is now?

C8.4.2. Question Rotation. Following the collection of the first ZCT chart, 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.

C8.4.3. Chart Requirements. In most instances, the collection of three charts (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 circumstance will a sixth chart be conducted. 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.

C8.4.4. Conduct of an Acquaintance Test. The ACQT may be collected as the first chart of this examination. It is conducted, in part, to acquaint the examinee with PDD procedures. The known-solution ACQT is the only ACQT taught by DoDPI.

## C8.5. TEST DATA ANALYSIS

C8.5.1. Numerical Analysis. The two numerical evaluation procedures are referred to as the 3- and 7-position scales.

C8.5.2. Spot Analysis. Relevant questions are grouped together and referred to as spots. The examiner monitors and evaluates the examinee's response in these spots. The three spots of the ZCT are:

C8.5.2.1. SPOT I: Questions in positions C4 & C6 compared to R5.

C8.5.2.2. SPOT II: Question in position C6 compared to R7.

C8.5.2.3. SPOT III: Question in position C9 compared to R10.

C8.5.3. Test Data Analysis Procedures. When comparing relevant and comparison questions, each component tracing will be reviewed and compared independently. The greatest physiological response of the comparison question(s) will be compared to the adjacent relevant question.

#### C8.5.4. Opinion Rendering Criteria

C8.5.4.1. Deception Indicated. To render 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 grand horizontal total of minus six (-6) or less for all spots.

C8.5.4.2. No Deception Indicated. To render an opinion of non-deception, there must be a plus one (+1) or greater in every overall vertical spot with a horizontal grand total of plus six (+6) or more for all spots.

C8.5.4.3. No Opinion. If it is not DI or NDI, it is NO with the exception of administrative opinions.

## C9. CHAPTER 9

### YOU-PHASE ZONE COMPARISON TEST

#### C9.1. SCOPE

This guide establishes essential elements for the conduct of the You-Phase ZCT, previously known as the bi-zone, for the Federal Government as taught by DoDPI.

#### C9.2. 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 DoDPI has changed little from the original Backster testing format.

#### 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 charts. (See figure C9.F1.)

Figure C9.F1. Question Review Sequence for the You-Phase Zone Comparison Test

Sacrifice Relevant (SR) Relevant ( R ) Comparison ( C ) Irrelevant ( I ) Symptomatic (SYM)
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#### C9.3.2. Questions Used in the You-Phase Zone Comparison Test

C9.3.2.1. 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 or a paraphrasing of question R5. (See figure C9.F2.)

Figure C9.F2. Samples of Primary Relevant Questions in the You-Phase Zone Comparison Test

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

C9.3.2.2. Probable-Lie Comparison 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. 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. The exclusionary and screening comparison questions are the two types of PLC questions used within the federal government. (See figure C9.F3.)

Figure C9.F3. Sample of a Probable-Lie Question

Theft issue: Before 1997, did you ever steal anything of value?

C9.3.2.3. 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. The relevant questions in the You-Phase ZCT address only the primary issue, for example, "Did you steal that Mustang?" Therefore, 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. (See figure C9.F4.)

Figure C9.F4. Sample of a Sacrifice Relevant Question

Regarding whether you stole that Mustang, do you intend to answer each question truthfully?

C9.3.2.4. Irrelevant Question. The irrelevant question is the first question asked during the data collection phase. It may also be asked in other positions on the chart. It is designed to allow the orienting response to habituate before a scoreable question is asked, and it can be used to establish homeostasis when an artifact occurs on the chart. Irrelevant questions should be unrelated to the issue being tested. Irrelevant questions are not scored. Several irrelevant questions may be reviewed and used as needed. (See figure C9.F5.)

Figure C9.F5. Samples of Irrelevant Questions

Are you now in Alabama?  
Are you sometimes called Tom?

C9.3.2.5. 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 scored during the test data analysis phase of a PDD examination. The symptomatic questions are #3 and #9 in the You-Phase ZCT format. (See figure C9.F6.)

Figure C9.F6. Samples of Symptomatic Questions

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?

## C9.4. DATA COLLECTION

### C9.4.1. Question Sequence (See figure C9.F7.)

Figure C9.F7. Data Collection Sequence for the You-Phase Zone Comparison Test

I	Are you sometimes called Mike?
SR	Regarding whether you stole that money, do you intend to answer each question truthfully
SYM	Do you believe I will only ask you the questions we reviewed?
C	Prior to 1996, did you ever steal anything from someone who trusted you?
R	Did you steal any of that money?
C	Prior to coming to Alabama, did you ever steal anything?
R	Did you steal any of that money from Jones' footlocker?
C	Prior to this year, did you ever steal anything from an employer?
SYM	Is there something else you are afraid I will ask you a question about?

C9.4.2. Question Rotation. Following the collection of the first You-Phase ZCT chart, the comparison questions may be rotated. The comparison question-exhibiting the greatest physiological response should be placed between the two relevant questions. The rotation of the comparison questions may be made on all subsequent charts.

C9.4.3. Chart Requirements. In most instances, the collection of three charts (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 circumstance will a sixth chart be conducted. 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.

C9.4.4. Conduct of an Acquaintance Test. The ACQT may be collected as the first chart of this examination. It is conducted, in part, to acquaint the examinee with PDD procedures. The known-solution ACQT is the only ACQT taught at DoDPI.

## C9.5. TEST DATA ANALYSIS

C9.5.1. Numerical Analysis. The two numerical evaluation procedures are referred to as the 3- and 7-position scales.

C9.5.2. You-Phase Spot Analysis. Relevant questions are grouped together in spots. The examiner monitors and evaluates the examinee's response in these spots. The two spots of the You-Phase ZCT are:

C9.5.2.1. SPOT I: Questions in positions C4 & C6 compared to R5.

C9.5.2.2. SPOT II: Questions in positions C6 & C8 compared to R7.

C9.5.3. Test Data Analysis Procedures. When comparing relevant and comparison questions, each component tracing will be reviewed and compared independently. The greatest physiological response of the comparison question(s) will be compared to the adjacent relevant question.

C9.5.4. Opinion Rendering Criteria.

C9.5.4.1. Deception Indicated. To render 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 horizontal total of minus four (-4) or less for all spots.

C9.5.4.2. No Deception Indicated. To render an opinion of non-deception, there must be a plus one (+1) or greater in every overall spot with a grand horizontal total of plus four (+4) or more for all spots.

C9.5.4.3. No Opinion. If it is not DI or NDI, it is NO with the exception of administrative opinions.

## C10. CHAPTER 10

### COMPARISON TEST FORMATS

#### C10.1. SCOPE

This guide establishes essential elements for the conduct of CTF examinations for the Federal Government as taught by DoDPI.

#### C10.2. BACKGROUND

The term CTF is an umbrella term which addresses variations of the MGQT. Although the ZCT is also a CTF, the ZCT will be considered separate since research and the PDD community address this question format as unique. The variations of the MGQT question formats addressed in this document have been validated through research and/or have been taught at DoDPI. These formats are among those used for personnel screening, source validation, and criminal specific PDD testing.

#### C10.3. PRETEST PHASE

C10.3.1. Question Review Sequence. During the pretest interview, all questions are reviewed with the examinee prior to the collection of charts. (See figure C10.F1.)

Figure C10.F1. Question Review Sequence for Comparison Test Formats

Sacrifice Relevant (SR) (when applicable)
Relevant ( R )
Comparison ( C )
Irrelevant ( I )

C10.3.2. Comparison Test Format Questions. The following question types may be used in CTF applications.

C10.3.2.1. Primary Relevant. This question tests the possible direct involvement of the examinee. (See figure C10.F2.)

Figure C10.F2. Sample of a Primary Relevant Question

Did you steal that car from that parking lot?
---

C10.3.2.2. Secondary Relevant. This question tests the examinee's possible involvement in the offense under investigation. A secondary relevant question should be constructed to address a secondary issue such as help, plan, or participate; test for secondary involvement such as seeing, hearing, or knowing; or focus on the nature or location of evidence and/or physical acts that support the primary offense. In the CTF, there are three types of secondary relevant questions.

C10.3.2.2.1. Evidence-Connecting. An evidence-connecting question is designed to determine if the examinee was involved with any of the evidence of the crime, or is aware of the nature or location of various items of evidence. (See figure C10.F3.)

Figure C10.F3. Sample of an Evidence-Connecting Relevant Question

Do you know where any of that money is now?

C10.3.2.2.2. Guilty-Knowledge. A Guilty-knowledge question is used to determine if the examinee has any knowledge of who committed the incident under investigation. (See figure C10.F4.)

Figure C10.F4. Samples of Guilty-Knowledge Relevant Questions

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

C10.3.2.2.3. Secondary-Involvement. This question tests for secondary involvement such as seeing or hearing or focuses on physical acts that support the primary offense. (See figure C10.F5.)

Figure C10.F5. Sample of a Secondary-Involvement Relevant Question

Did you participate in the theft of any of that money?

C10.3.3. Probable-Lie Comparison 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. 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. The exclusionary and screening comparison questions are the two types of PLC questions used within the federal government. (See figure C10.F6.)

Figure C10.F6. Sample of a Probable-Lie Comparison Question

Theft issue: Before 1997, did you ever steal anything of value?

C10.3.4. Directed-Lie Comparison. 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 question on the test. The DLC question is separated from the relevant issue by category. The DLC question in the CTF context may be used in counterintelligence matters. It is inappropriate to utilize DLC and PLC questions in the same test. (See figure C10.F7.)

Figure C10.F7. Sample of a Directed-Lie Comparison Question

Did you ever lie to a coworker about anything?

C10.3.5. Sacrifice Relevant. When used, this is the first question that refers to the relevant issue, and it prepares the examinee for the introduction of the relevant questions. (See figure C10.F8.)

Figure C10.F8. Sample of a Sacrifice Relevant Question

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

C10.3.6. Irrelevant. An irrelevant question is the first question asked during the data collection phase. It may also be asked in other positions on the chart. It is designed to allow the orienting response to habituate before a scoreable question is asked and can be used to establish homeostasis when an artifact occurs on the chart. Irrelevant questions should be unrelated to the issue being tested. Irrelevant questions are not scored. Several irrelevant questions may be reviewed and used as needed. (See figure C10.F9.)

Figure C10.F9. Samples of Irrelevant Questions

Are you now in Alabama?  
Are you sometimes called Tom?

#### C10.4. DATA COLLECTION PHASE

C10.4.1. Question Format. With the possible exception of irrelevant questions, all questions reviewed during the pretest phase of the examinations will be asked during the data collection phase. The exact sequence in which the questions are to be asked in the data collection phase is not revealed.

C10.4.2. The test format should begin with an irrelevant question. Irrelevant questions may be inserted into each chart as needed. A sacrifice relevant question may be included in the test format. Two to five relevant and two to four comparison questions may be used.

C10.4.3. When a single relevant-question-test is required, the You-Phase ZCT should be used.

C10.4.4. Test Operations. After the first chart, comparison and/or relevant questions should be rotated. At least one of the subsequent charts must involve the rotating of the relevant and/or comparison questions. After the first chart, subsequent charts should be constructed so that the relevant question that had displayed the greatest physiological responses is adjacent to the comparison question(s) with the greatest physiological responses. Each relevant question should be bracketed by comparison questions in at least one chart of each series.

C10.4.5. Chart Requirements. In most instances, the collection of three charts (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 circumstance will a sixth chart be conducted. 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.

C10.4.6. Conduct of an Acquaintance Test. The ACQT may be collected as the first chart of this examination. It is conducted, in part, to acquaint the examinee with PDD procedures. The known-solution ACQT is the only ACQT taught by DoDPI.

## C10.5. TEST DATA ANALYSIS

C10.5.1. Numerical Analysis. The two numerical evaluation procedures are referred to as the 3- and 7-position scales.

C10.5.2. Spot Analysis. Relevant questions are grouped together in spots. The examiner monitors and evaluates the examinee's response in these spots.

C10.5.3. Test Data Analysis Procedures. When comparing relevant and comparison questions, each component tracing will be reviewed and compared independently. The greatest physiological response of the comparison question(s) will be compared to the adjacent relevant question(s).

### C10.5.4. Opinion Rendering Criteria.

C10.5.4.1. Deception Indicated. To render an opinion that the examinee is deceptive on the CTF, 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.

C10.5.4.2. No Deception Indicated. To render an opinion of non-deception, there must be a plus three (+3) or greater in every overall vertical spot when using the 7-position scale.

C10.5.4.3. No Opinion. If based upon physiological responses to the applied stimuli an opinion of NDI or DI cannot be rendered, the opinion is NO. When appropriate, an administrative opinion should be rendered.

## C11. CHAPTER 11

### PEAK OF TENSION TEST

#### C11.1. SCOPE

This guide establishes essential elements for the conduct of the POT formats for the Federal Government as taught at DoDPI.

#### C11.2. BACKGROUND

The POT was developed by Leonarde Keeler to determine possible guilty knowledge possessed by an examinee. It is used most frequently after an examination in which a DI opinion has been rendered. The known-solution POT is used when an examinee denies any knowledge regarding a specific element of a crime or incident that has been verified through investigation or other means. The searching POT is used when the crucial key area is suspected to be known by an examinee who denies any such knowledge. This format is also known as the unknown or probing POT.

#### C11.3. PRETEST PHASE

C11.3.1. Question Review. During the pretest interview, all POT and SPOT questions are reviewed with the examinee prior to the collection of charts. The questions are reviewed in the sequence they are to be asked. (See figures C11.F1. and C11.F2.)

Figure C11.F1. Sample of a Peak of Tension Question Sequence

Preparatory Phrase
Prefix phrase
Padding
Key
Padding

Figure C11.F2. Sample of a Searching Peak of Tension Question Sequence

Preparatory Phrase
Prefix phrase
Padding
Key choices
Coverall
Padding

#### C11.3.2. Questions Used in the POT and SPOT

C11.3.2.1. POT Key. The POT key is a fact about the crime which should be known only by the perpetrator, the examiner, and the investigators.

C11.3.2.2. SPOT Key Choices. The SPOT key is a fact about the crime known only by the perpetrator.

C11.3.2.3. Padding Questions. Padding questions are used before and after the key. They must be similar to the key, and the same prefix should be used with padding questions and the key. Padding questions must not involve the relevant issue.

C11.3.2.4. False Key. This is an optional padding question which has special meaning to the examinee. It is always placed in the second position and has at least one padding question between it and the key. The principal of the false key is similar to a comparison question. The examinee will react to it because he/she has been sensitized to it; the deceptive examinee should display the most significant response to the key. A false key is only used in a known-solution POT.

C11.3.2.5. Preparatory Phrase. This is the prefix to the first question of a POT or SPOT. It is used to focus the examinee's attention to the issue which is being tested. It is only stated at the beginning of the first question. (See figure C11.F3.)

Figure C11.F3. Preparatory Phrase for the First Question of a Peak of Tension Test

Regarding the amount of money stolen from that wallet:...
---

C11.3.2.6. Prefix Phrase. This phrase is a continuation of the preparatory phrase. It is asked with each question used within the POT and SPOT structure. Since the purpose is to test for guilty knowledge, the prefix phrase is worded, "Was it,...?", or "Is it...?"

C11.3.2.7. Coverall Question. This question is used in the SPOT. The question following the prefix phrase is worded, e.g., "...somewhere else not mentioned?", and is normally placed in the seventh position. It is intended to cover any other area or possible key not previously addressed.

#### C11.4. DATA COLLECTION

##### C11.4.1. Question Sequences (See figures C11.F4. and C11.F5.)

Figure C11.F4. Sample of a Peak of Tension Question Sequence

Preparatory phrase	Regarding the color of that car,...
Prefix	was it...
Padding question	red?
Padding question	blue?
Padding question	green?
Key question	white?
Padding question	silver?
Padding question	black?

Figure C11.F5. Sample of a Searching Peak of Tension Question Sequence

Preparatory phrase	Regarding the location of that property,...
Prefix	is it located in...
Padding question	Geneva?
Padding question	London?
Key choice	area A?
Key choice	area B?
Key choice	area C?
Key choice	area D?
Coverall	an area (I have) not mentioned?
Padding question	Frankfurt
Padding question	Milan?

C11.4.2. Question Rotation. The SPOT and POT normally consist of three charts. The first two charts are asked in the above sequence. The third chart is reviewed and conducted in reverse sequence. If no opinion can be rendered after three charts, a fourth, unreviewed, and mixed-sequence chart may be collected.

C11.4.3. Known-solution Format Procedures. The known-solution POT examination may consist of six to nine questions. The key should not be placed in the middle of the examination. Only one key can be tested per examination.

C11.4.3.1. A visual stimulus is used in the POT to insure the examinee knows the sequence of the examination.

C11.4.3.2. The POT is normally used following a deceptive initial examination.

C11.4.3.3. All questions are worded to elicit a no answer.

C11.4.4. Searching Peak of Tension Format Procedures. The key is unknown and the examination normally consists of nine questions. There must be at least two padding questions at the beginning and end of the sequence.

C11.4.4.1. A visual stimulus is used in the SPOT to insure the examinee knows the sequence of the examination.

C11.4.4.2. The SPOT is generally used following a deceptive initial examination.

C11.4.4.3. All questions are worded to elicit a no answer.

## C11.5. TEST DATA ANALYSIS

C11.5.1. Global Analysis. The POT and SPOT are not evaluated numerically as in comparison question formats. They are evaluated utilizing the test data analysis procedures for POT and SPOT as taught by DoDPI.

C11.5.2. Opinion Rendering Criteria.

C11.5.2.1. If the examinee displayed physiological responses at the same question on at least two of the three POT or SPOT charts collected, the examiner must conclude that there were significant responses.

C11.5.2.2. If the examinee does not display evaluative criteria at the same test question in any of the recorded physiological parameters on at least two of the three charts collected, the examiner must conclude that there were no significant responses.

C11.5.2.3. For administrative purposes, an opinion of SR indicates guilty knowledge.

## C12. CHAPTER 12

### RELEVANT/IRRELEVANT SCREENING TEST

#### C12.1. SCOPE

This guide establishes essential elements for the conduct of the R/I screening format for the Federal Government as taught by DoDPI.

#### C12.2. BACKGROUND

The R/I technique was developed in large part by Leonard Keeler and subsequently adopted by agencies of the Federal Government.

#### C12.3. PRETEST PHASE

C12.3.1. Question Review. During the pretest interview, relevant, irrelevant, and overall truth questions, if used, are reviewed with the examinee. The exact wording of the math question is not reviewed. (See figure C12.F1.)

Figure C12.F1. Question Review Sequence for the Relevant/Irrelevant Test

Relevant ( R )
Irrelevant ( I )
Overall truth (OT)
Math ( M )

#### C12.3.2. Relevant/Irrelevant Test Questions

C12.3.2.1. Relevant. This question pertains directly to the matter under investigation or to the issue(s) for which the examinee is being tested. In R/I screening examinations, all relevant questions are considered primary relevant questions. (See figure C12.F2.)

Figure C12.F2. Samples of Relevant Questions

Have you ever engaged in espionage against the United States?
Have you ever been involved in subversive activity?
Have you ever provided classified information to an unauthorized person?

C12.3.2.2. Irrelevant. In R/I formats, the irrelevant question is designed to allow the orienting response to habituate before a relevant question is asked and has special applications in the R/I question format. They are designed to be neutral but should appear to be meaningful to the examinee. Irrelevant questions should be non-emotion evoking and unrelated to the issue under investigation. Several irrelevant questions may be reviewed and used as needed. Irrelevant questions are not scored against relevant test questions. (See figure C12.F3.)

Figure C12.F3. Sample of Irrelevant Questions for the Relevant/Irrelevant Test

Is today Friday?  
Are you now in Alabama?  
Do you live in MD?

C12.3.2.3. Overall Truth. This is an optional question which may be used in an R/I question format. It is similar to the sacrifice relevant question in comparison question formats. It is intended to elicit a physiological response which may be indicative of the examinee's overall response capability. This question may be asked near the beginning and/or at the end of a PDD chart. (See figure C12.F4.)

Figure C12.F4. Samples of Overall Truth Questions for the Relevant/Irrelevant Test

Do you intend to answer truthfully all of the questions on this test?  
Have you truthfully answered all of the questions on this test?

C12.3.2.4. Stimulus Question. This question is an optional question which may be used to determine the examinee's overall capacity for response. It is only used when the examinee exhibits a consistent lack of response. The stimulus question taught by DoDPI in the R/I format is the math question. The examinee is told that a math question may be asked during the examination. (See figure C12.F5.)

Figure C12.F5. Samples of Math Questions for the Relevant/Irrelevant Test

Does  $10 + 9 = 19$ ?  
Does  $7 + 5 = 12$ ?

## C12.4. DATA COLLECTION

C12.4.1. Question Sequence. The initial and subsequent question sequence is at the discretion of the examiner. The examiner has the flexibility to use the most appropriate question-order based upon the demonstrated physiological responses of the examinee. Questions may be repeated during a chart when using an R/I format. (See figure C12.F6.)

Figure C12.F6. Sample of Initial Question Sequence for the Relevant/Irrelevant Test

I Is today Friday?  
I Are you now in Alabama?  
R Have you ever been involved in a serious crime?  
R Have you deliberately falsified any part of your security forms?  
R Have you been involved in illegal drugs during the past five years?  
I Do you live in Maryland?  
R Have you deliberately falsified any part of your security forms?  
R Have you ever been involved in a serious crime?  
R Have you been involved in illegal drugs during the past five years?  
OT Have you truthfully answered all of the questions on this test?

C12.4.2. Question Rotation. The order of questions on subsequent charts is at the discretion of the examiner based upon the responses of the examinee and format procedures.

### C12.4.3. Question Format Procedures.

C12.4.3.1. Acquaintance Test. This test is optional. If an ACQT is conducted it should be conducted as the first chart.

C12.4.3.2. Question Interval. Each chart will normally consist of no more than 12 questions. A question spacing of 20 to 25 seconds from onset of stimulus should be maintained throughout the examination. Irrelevant questions may be inserted as needed.

C12.4.3.3. Pattern Avoidance. The test must be conducted in an unpredictable manner that is consistent with the following R/I format rules. Subsequent charts should start with a different irrelevant question. The ratio of relevant questions to irrelevant questions should be varied. Never ask more than three relevant questions in a row. Pattern avoidance can be accomplished by varying the wording of questions to require a yes or no answer.

C12.4.3.4. Number of Charts. A minimum of two charts and no more than four charts are conducted for each series of an R/I examination. No more than six artifact-free askings of a relevant question should routinely be collected during a series. If additional askings are necessary, an additional series should be constructed using a different testing format or an R/I format with new relevant questions. A phase may be made up of multiple series.

C12.4.3.5. Breakdown Test. A breakdown test is conducted to verify an examinee's statements regarding an issue after specific responses to one question have been observed during an R/I screening examination. The issue is separated from the remaining test questions, and a breakdown test is conducted. To devise appropriate breakdown questions, divide the issue into its logical components and design a question to cover each key area. The breakdown test can be conducted using an R/I format or a comparison question format.

C12.4.3.6. Clearing Test. The clearing test should be used in the R/I format after a breakdown test. The clearing test is made up of the remaining relevant test questions that were not covered in the breakdown test from the original series. The test will not contain any questions dealing with the issue covered in the breakdown. For an NSR decision, relevant questions asked on the clearing test must be asked a minimum of twice with no artifacts or significant physiological responses. On occasion, it may be appropriate to conduct the clearing chart prior to the breakdown examination. This determination will be made by the examiner in coordination with individual agency policies and procedures.

C12.4.3.7. Askings of Relevant Questions. There must be at least two artifact-free examples of each relevant question in order to be evaluated. Each test should contain no more than five relevant questions. Relevant questions may be asked two times during a chart. No more than three relevant questions should be asked consecutively on a chart.

C12.4.3.8. Askings of Irrelevant Questions. These questions are placed at the beginning of each chart, and are interspersed between the relevant questions throughout the chart as needed.

Irrelevant questions should be asked after any relevant question that results in a lengthy response.

C12.4.4. Conduct of an Acquaintance Test. The ACQT is conducted, in part, to acquaint the examinee with PDD procedures. The ACQT is optional with this question format. The known-solution ACQT is the only ACQT taught by DoDPI.

## C12.5. TEST DATA ANALYSIS

C12.5.1. Global Analysis. The evaluation procedure used in the Federal Government for R/I screening examinations is the global test data analysis procedure. This evaluation process requires the examiner to evaluate each PDD chart as a whole and does not employ the use of numerical values. Since there are no comparison questions in this technique, the presence or absence of responses to a question is compared with the rest of the chart tracings in their entirety. Only data that is timely and consistent with the applied stimulus and free of artifacts and noise on the signal of interest is considered.

### C12.5.2. Opinion Rendering Criteria

C12.5.2.1. Significant Response. The examinee exhibited consistent, timely, significant responses to at least one of the relevant questions.

C12.5.2.2. No Significant Response. The charts revealed that the subject failed to exhibit consistent, timely, and significant responses to the relevant questions.

C12.5.2.3. No Opinion. The examiner cannot render an opinion based upon the physiological responses to the relevant questions.

C12.5.3. Rank Order Scoring System. The ROSS ranks the questions on the charts from greatest to least responsiveness. In ROSS, each physiological parameter, i.e., respiration, electrodermal, and cardiovascular, is evaluated separately. The ROSS provides the examiner with a cumulative picture of the consistent, significant, and timely responses on the PDD charts. This method of evaluation is used exclusively to evaluate R/I questioning formats.

## C13. CHAPTER 13

### SPECIFIC ISSUE RELEVANT/IRRELEVANT TEST

#### C13.1. SCOPE

This guide establishes essential elements for the conduct of the Specific Issue R/I format for the Federal Government as taught by DoDPI.

#### C13.2. BACKGROUND

The Specific Issue R/I technique was developed in large part by Leonard Keeler and was subsequently adopted by various agencies of the Federal Government.

#### C13.3. PRETEST PHASE

C13.3.1. Question Review. During the pretest interview, all questions will be reviewed with the examinee prior to the collection of charts. The order of review is the examiner's option, but the questions should be reviewed in groups, i.e., relevant questions, irrelevant questions, and overall truth questions. (See figure C13.F1.)

Figure C13.F1. Question Review Sequence for the Specific Issue Relevant/Irrelevant Test

Relevant ( R )
Irrelevant ( I )
Overall Truth (OT)
Stimulus (S)

#### C13.3.2. Specific Issue Relevant/Irrelevant Questions

C13.3.2.1. Relevant. This question pertains directly to the matter under investigation or to the issue(s) for which the examinee is being tested.

C13.3.2.1.1. Primary Relevant. This question tests the possible direct involvement of the examinee. (See figure C13.F2.)

Figure C13.F2. Samples of Primary Relevant Questions

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

C13.3.2.1.2. Secondary Relevant. This question tests the examinee's possible indirect involvement in the offense under investigation. This involves matters such as evidence connecting, guilty knowledge, or secondary involvement, (See figure C13.F3.)

Figure C13.F3. Samples of Secondary Relevant Questions

Did you help steal that car?  
Do you know how that car was disposed of?  
Do you know for sure who stole that car?  
Did you plan with anyone to steal that car?

C13.3.2.2. Irrelevant. An irrelevant question is the first question asked during the data collection phase; it may also be asked in other positions on the chart. It is designed to allow the orienting response to habituate before a relevant question is asked and can be used to establish homeostasis when an artifact occurs on the chart. Irrelevant questions should be unrelated to the issue being tested. Irrelevant questions are not scored. Several irrelevant questions may be reviewed and used as needed. (See figure C13.F4.)

Figure C13.F4. Samples of Irrelevant Questions

Are you now in Alabama?  
Are you sometimes called Tom?

C13.3.2.3. Overall Truth. This is an optional question which may be used in an R/I question format. It is similar to the sacrifice relevant question in comparison question formats. It is intended to elicit a physiological response which may be indicative of the examinee's overall response capability. This question may be asked near the beginning and/or at the end of a PDD chart. (See figure C13.F5.)

Figure C13.F5. Samples of the Overall Truth Questions

Do you intend to answer truthfully to all of the questions on this test?  
Have you truthfully answered all of the questions on this test?

C13.3.2.4. Specific Issue Relevant/Irrelevant Stimulus. This question is used to determine the examinee's overall capacity for response. It is primarily used when the examinee exhibits a consistent lack of response. In the Specific Issue R/I format, the stimulus question can be directed at specific thoughts, beliefs, or actions of the examinee as it relates to the issue under investigation. Responses to the applied stimulus question will not be used as comparison questions. (See figure C13.F6.)

Figure C13.F6. Samples of Specific Issue Relevant/Irrelevant Stimulus Questions

Do you feel threatened by this test?  
When you were accused of stealing, were you mad?

## C13.4. DATA COLLECTION PHASE

C13.4.1. Question Sequence. Question sequence in the Specific Issue R/I format is flexible and the examiner has the choice in the manner in which the charts are collected. (See figure C13.F7.)

Figure C13.F7. Sample of a Specific Issue Relevant/Irrelevant Question Sequence

I	Is today Monday?
I	Is this the month of October?
OT	Have you deliberately withheld any pertinent information from me during this interview?
R	Did you receive anything of benefit from that registered pouch?
R	Did you remove any of the contents of that pouch?
I	Are you now in the city of Birmingham?
R	Did you steal that pouch?
R	Do you know where any of the contents of that pouch are now?
OT	Have you lied to any question on this test?
I	Is today Monday?

C13.4.2. Question Rotation. The examiner may collect three or four charts with each relevant question being asked once on each chart or two charts containing a combined total of at least three askings of each relevant question. There should never be fewer than three undistorted askings of each relevant question. Each chart must contain all relevant questions asked at least one time. Relevant questions may be repeated on individual charts.

#### C13.4.3. Test Format Operations

C13.4.3.1. If an ACQT is used, it will be the first chart collected.

C13.4.3.2. No more than three relevant questions will be asked in sequence. Do not repeat any question back-to-back.

C13.4.3.3. The first operational chart begins with at least two irrelevant questions or one irrelevant question and one overall truth question.

C13.4.3.4. The overall truth questions will be asked prior to the first relevant question or after the last relevant has been asked on the chart.

C13.4.3.5. The most responsive relevant question on the previous chart(s) should not be the first relevant question asked on the next chart.

C13.4.3.6. At least three and no more than five relevant questions will be asked during a series.

C13.4.3.7. Only questions addressing elements associated with the issue being tested can be asked. Relevant questions covering different crimes are not permitted.

C13.4.4. Conduct of an Acquaintance Test. The ACQT is conducted in part to acquaint the examinee with PDD procedures. The ACQT is optional with this question format. The known-solution ACQT is the only ACQT taught by DoDPI.

## C13.5. TEST DATA ANALYSIS

C13.5.1. Global Analysis. This evaluation process requires the examiner to evaluate each PDD chart as a whole. This approach does not employ the use of numerical values. Since there are no comparison questions, the presence or absence of response to a question is compared with the rest of the chart tracings in their entirety. Only data that is timely and consistent with the applied stimulus and free of artifacts and noise on the signal of interest is considered.

### C13.5.2. Opinion Rendering Criteria

C13.5.2.1. Deception Indicated. The subject has exhibited consistent, timely, and significant responses to one or more of the relevant questions the majority of times that it was asked.

C13.5.2.2. No Deception Indicated. The charts revealed that the subject failed to exhibit consistent, timely, and significant responses to the relevant questions.

C13.5.2.3. No Opinion. If it is not DI or NDI, it is NO with the exception of administrative opinions.

## C14. CHAPTER 14

### TEST FOR ESPIONAGE AND SABOTAGE

#### C14.1. SCOPE

This guide establishes essential elements for the conduct of the TES question format for the Federal Government as taught by DoDPI.

#### C14.2. BACKGROUND

The TES was designed and researched by the DoDPI Research Division Staff and subsequently adopted by DoDPI for use in CSP examinations.

#### C14.3. PRETEST PHASE

C14.3.1. Question Review. During the pretest interview, only the questions for the sub-test about to be tested are reviewed with the examinee prior to the collection of charts. (See figure C14.F1.)

Figure C14.F1. Question Review Sequence for the Test for Espionage and Sabotage

Sacrifice Relevant (SR) Relevant (R1 & R2, or R3 & R4, or R5 & R6 if used) Directed-Lie Comparison (C1 & C2) Irrelevant (I1 & I2)
--

#### C14.3.2. Test for Espionage and Sabotage Questions

C14.3.2.1. Relevant. This question pertains directly to the issue(s) being tested. The relevant question tests the possible direct involvement of the examinee.

C14.3.2.2. Directed-Lie Comparison. 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 C14.F2.)

Figure C14.F2. Directed-Lie Comparison Question for the Test for Espionage and Sabotage

Did you ever commit a minor traffic violation?
--

C14.3.2.3. Sacrifice Relevant. This is the first question of the TES format that refers to the relevant issues, and it prepares the examinee for the introduction of the relevant questions. (See figure C14.F3.)

Figure C14.F3. Samples of a Sacrifice Relevant Question for the Test for Espionage and Sabotage

Do you intend to answer the security questions truthfully? Regarding the security questions, do you intend to answer truthfully?
---

C14.3.2.4. Irrelevant Question. An irrelevant question is the first question asked during the data collection phase. It may also be asked in other positions on the chart. It is designed to allow the orienting response to habituate before a scoreable question is asked and can be used to establish homeostasis when an artifact occurs on the chart. Irrelevant questions should be unrelated to the issue being tested. Irrelevant questions are not scored. Several irrelevant questions may be reviewed and used as needed. (See figure C14.F4.)

Figure C14.F4. Samples of Irrelevant Questions

Are you now in Alabama?  
Are you sometimes called Tom?

#### C14.4. DATA COLLECTION

C14.4.1. Sub-Tests. The TES was originally designed to test four relevant questions. The format can be expanded to test six relevant questions. The TES consists of two sub-tests (A and B) when four relevant questions are tested, and three sub-tests (A, B, and C) when six relevant questions are tested.

C14.4.2. Question Sequence. Sub-Tests A, B, and C are sequenced the same. Relevant questions #1 and #2 are asked on Sub-Test A. Relevant questions #3 and #4 are asked on Sub-Test B, and relevant questions #5 and #6 are asked on Sub-Test C. If desired, the DLC and irrelevant questions may be different for each sub-test. (See figure C14.F5.)

Figure C14.F5. Question Sequence for Sub-Test A for the Test for Espionage and Sabotage

I1	Irrelevant
I2	Irrelevant
SR	Sacrifice relevant
1C1	First asking of DLC #1
1R1	First asking of relevant #1
1R2	First asking of relevant #2
1C2	First asking of DLC #2
2R1	Second asking of relevant #1
2R2	Second asking of relevant #2
2C1	Second asking of DLC #1
3R1	Third asking of relevant #1
3R2	Third asking of relevant #2
2C2	Second asking of DLC #2

C14.4.3. Question Format Procedures. Test procedures require a minimum of three askings of each relevant question. The physiological tracings should be free of artifacts in at least two of the three component tracings at each asking of the relevant questions and able to be evaluated against at least one of the bracketing comparison questions. If after three askings of the relevant questions artifacts prevent scoring of one or both of the relevant questions, an additional asking of both relevant questions for that sub-test will be conducted. One of the following procedures will be used to accomplish this:

C14.4.3.1. If the examiner realizes that a fourth asking is necessary prior to the completion of the chart, a fourth asking may be collected on the same chart. Three questions are added after 2C2. (See figure C14.F6.)

Figure C14.F6. Extended Question Sequence for Sub-Test A for the Test for Espionage and Sabotage

I1	Irrelevant
I2	Irrelevant
SR	Sacrifice relevant
1C1	First asking of DLC #1
1R1	First asking of relevant #1
1R2	First asking of relevant #2
1C2	First asking of DLC #2
2R1	Second asking of relevant #1
2R2	Second asking of relevant #2
2C1	Second asking of DLC #1
3R1	Third asking of relevant #1
3R2	Third asking of relevant #2
2C2	Second asking of DLC #2
4R1	Fourth asking of relevant #1
4R2	Fourth asking of relevant #2
3C1	Third asking of DLC #1

C14.4.3.2. If the examiner does not realize that a fourth asking is necessary until the chart has been collected, a short chart may be collected. (See figure C14.F7.)

Figure C14.F7. Test for Espionage and Sabotage Short Chart

I1	Irrelevant
I2	Irrelevant
SR	Sacrifice relevant
3C1	Third asking of DLC #1
4R1	Fourth asking of relevant #1
4R2	Fourth asking of relevant #2
3C2	Third asking of DLC #2

C14.4.3.3. Each sub-test is administered and resolved as an individual test. After the resolution of a sub-test, the questions for the next sub-test are introduced and tested.

C14.4.3.4. Any of the sub-tests may be administered first. Regardless of the order in which the sub-tests are administered, a subsequent sub-test should not be administered if the previous sub-test has not been resolved.

C14.4.3.5. When a sub-test (i.e., TESA) results in a decision of NO or SR, a post-test interview will be conducted to determine if there is a reasonable explanation for the responses. If the subsequent sub-test (i.e. TESA2) continues to yield a NO or a SR decision with a reasonable post-test explanation for the responses, additional testing is appropriate. The subsequent sub-tests (i.e. TESA3 and TESA4) are breakdown tests and must be a different

format (MGQT, ZCT, etc.) and must contain different relevant questions addressing the NO or SR issue(s).

C14.4.3.6. When a sub-test (i.e. TESA) results in a decision of NO or SR, a post-test interview will be conducted to determine if there is a reasonable explanation for the responses. If the examinee fails to provide a reasonable explanation, a second sub-test (i.e. TESA2) may be conducted. If the second sub-test results in a decision of NO or SR and the examinee fails to provide a reasonable explanation for the responses, additional testing (i.e. TESA3 – the third series of sub-test A) will only be appropriate when the necessity/rationale for that series is clearly elaborated in the polygraph report. A detailed post-test interview will be conducted regarding the relevant issue(s) prior to conducting TESA3. When a third series is accomplished it must be a breakdown test using a different format (MGQT, ZCT, etc.) and different relevant questions.

C14.4.3.7. When the TESA3 sub-test results in a decision of NO or SR and no reasonable explanation is provided, the PDD examiner must elaborate the rationale for additional testing (i.e. beyond TESA3) in the polygraph report. The fourth series will be a specific issue examination on the most responsive relevant question. If the fourth test series results in a NO or SR decision and no significant admissions are obtained all testing is terminated and the results will be reported to the appropriate security personnel outside of the polygraph program. Additional testing is only authorized when polygraph personnel are so directed by agency senior management. The rationale for additional testing will be documented.

C14.4.4. Conduct of an Acquaintance Test. The ACQT will be collected as the first chart of the TES examination. It is conducted in part to acquaint the examinee with PDD procedures. The known-solution ACQT is the only ACQT taught by DoDPI.

#### C14.5. TEST DATA ANALYSIS

C14.5.1. Numerical Analysis. Test for Espionage and Sabotage PDD charts are analyzed using the 7-position scale.

C14.5.2. No Split Opinions. An examinee is SR, NSR, or NO to the test not to a question.

C14.5.3. 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, purposeful non-cooperation, etc., are appropriate.

C14.5.4. Spot Analysis. The 7-position numerical evaluation system analyzes the physiological responses recorded on the chart by comparing the relevant questions to the largest response by component tracing of the DLC questions. (See figure C14.F8.)

Figure C14.F8. Spot Analysis for the Test for Espionage and Sabotage

1R1 and 1R2 compared to 1C1 or 1C2
2R1 and 2R2 compared to 1C2 or 2C1
3R1 and 3R2 compared to 2C1 or 2C2

When a fourth asking is required:  
4R1 and 4R2 compared to 2C2 or 3C1

When a short test is required:  
4R1 and 4R2 compared to 3C1 or 3C2

C14.5. 5. Test Data Analysis of a Fourth Asking. When a fourth asking of the relevant questions is necessary, only the relevant question(s) that could not be evaluated due to artifacts will be scored.

#### C14.6. OPINION RENDERING CRITERIA

C14.6.1. Significant Response. A minus three (-3) or less in any overall vertical spot, or an overall horizontal total score of minus four (-4).

C14.6.2. No Significant Response. At least a plus one (+1) at each overall vertical spot and an overall horizontal total score of at least plus four (+4).

C14.6.3. No Opinion. If it is not SR or NSR, it is NO with the exception of administrative opinions.

## C15. CHAPTER 15

### LAW ENFORCEMENT APPLICANT TESTING

#### C15.1. SCOPE

This guide establishes essential elements for the conduct of law enforcement applicant testing as used by agencies within the Federal Government.

#### C15.2. BACKGROUND

Law enforcement applicant examinations are a specific application of the comparison test format. Law enforcement applicant formats were developed by Federal agencies as the primary personnel screening technique to test applicants for employment in sensitive law enforcement positions. Law enforcement applicant formats address national security, integrity, and suitability issues.

#### C15.3. PRETEST PHASE

C15.3.1. Question Review Sequence. During the pretest interview, all questions are reviewed with the examinee prior to the collection of charts. (See figure C15.F1.)

Figure C15.F1. Question Review Sequence for a Law Enforcement Applicant Test

Sacrifice Relevant (SR) Relevant ( R ) Comparison ( C ) Irrelevant ( I )
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C15.3.2. Law Enforcement Applicant Questions. The following question types are generally used in law enforcement applicant testing.

C15.3.2.1. Relevant. This question pertains directly to the issues being tested. The relevant question tests the possible direct involvement of the examinee. (See figure C15.F2.)

Figure C15.F2. Samples of Relevant Questions for a Law Enforcement Applicant Test

Have you ever had any unauthorized foreign contacts? Have you ever sold any illegal drugs?
---

C15.3.2.2. Probable-Lie Comparison 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. 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. The exclusionary and screening comparison questions are the two types of PLC questions used within the federal government. (See figure C15.F3.)

Figure C15.F3. Sample of a Probable-Lie Comparison Question for a Law Enforcement Applicant Test

Prior to your 18th birthday, did you ever lie to anyone who trusted you?

C15.3.2.3. **Sacrifice Relevant.** This is the first question of the format that refers to the relevant issues. The sacrifice relevant prepares the examinee for the introduction of the relevant questions. The question addresses the relevant issue and should not exceed the scope of the relevant issue. (See figure C15.F4.)

Figure C15.F4. Sample of a Sacrifice Relevant Question

In connection with your application for employment, do you intend to answer each question truthfully?

C15.3.2.4. **Irrelevant Question.** An irrelevant question is the first question asked during the data-collection phase. It may also be asked in other positions on the chart. It is used to allow the orienting response to habituate, and it can be used to reestablish baseline when an artifact occurs on the chart. Irrelevant questions should be unrelated to the issues being tested. Irrelevant questions are not scored. Several irrelevant questions may be reviewed and used as needed. (See figure C15.F5.)

Figure C15.F5. Sample of an Irrelevant Question for a Law Enforcement Applicant Test

Are you now in Alabama?

#### C15.4. DATA COLLECTION PHASE

C15.4.1. **Question Format.** The test format should begin with an irrelevant question. Irrelevant questions may be inserted into each chart as needed. A sacrifice relevant question will be included in the test format. Two to five relevant questions may be used.

C15.4.2. **Question Sequence.** With the possible exception of irrelevant questions, all questions reviewed during the pretest phase of law enforcement applicant examinations 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 C15.F6. and C15.F7.)

Figure C15.F6. Sample of a Question Sequence for a Law Enforcement Applicant Test—National Security Examination

I SR C R C R C R C R C

Figure C15.F7. Sample of a Question Sequence for a Law Enforcement Applicant Test—Integrity and Suitability Examination

I SR C R C R C R C

C15.4.3. **Data-Collection Phase.** After the first chart, relevant and comparison questions may be rotated, or a mixed series may be used. At least one of the subsequent charts must be a mixed series. After the first chart, subsequent charts should be constructed so that the relevant question displaying the greatest physiological responses is adjacent to the comparison question(s) with the

greatest physiological response. Each relevant question should be bracketed by comparison questions in at least one chart of each series.

C15.4.4. Chart Requirements. In most instances, the collection of three charts (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 circumstance will a sixth chart be conducted. 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.

C15.4.5. Conduct of Acquaintance Test. The ACQT may be collected as the first chart of this examination. It is conducted, in part, to acquaint the examinee with the PDD procedures. The known-solution ACQT is the only ACQT taught by DoDPI.

## C15.5. TEST DATA ANALYSIS

C15.5.1. Numerical Analysis. The 7-position scale is normally used to evaluate test data.

C15.5.2. Spot Analysis. Relevant questions are grouped together in spots. The examiner monitors and evaluates the examinee's responses in these spots.

C15.5.3. Test Data Analysis Procedures. When comparing relevant and comparison questions, each component tracing will be reviewed and compared independently. The greatest physiological response in the comparison question(s) will be compared to the adjacent relevant question(s).

C15.5.4. Opinion Rendering Criteria.

C15.5.4.1. Significant Response. To render 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 render an opinion as is the case in the ZCT.

C15.5.4.2. No Significant Response. To render an opinion of NSR, the numerical score must be plus three (+3) or greater in every overall vertical spot when using a 7-position scale.

C15.5.4.3. No Opinion. If based upon physiological responses to the applied stimuli an opinion of SR or NSR cannot be rendered, the opinion is NO. When appropriate, an administrative opinion should be rendered.

C15.5.5. 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, purposeful non-cooperation, etc., are appropriate.

## C16. CHAPTER 16

### COUNTERINTELLIGENCE SCOPE POLYGRAPH TEST

#### C16.1. SCOPE

This guide establishes essential elements for the conduct of CSP tests as used by agencies within the Federal Government.

#### C16.2. BACKGROUND

The CSP was developed in 1981 and implemented in 1982 by the Air Force Office of Special Investigations. Prior to the development of the test for espionage and sabotage, variations of the CSP test were used by many Federal agencies for personnel screening examinations.

#### C16.3. PRETEST PHASE

C16.3.1. Question Review. During the pretest interview, all test questions are reviewed with the examinee prior to the collection of charts. (See figure C16.F1.)

Figure C16.F1. Question Review Sequence for a Counterintelligence Scope Polygraph

Sacrifice Relevant (SR) Relevant (R) Comparison (C) Irrelevant (I)
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#### C16.3.2. Counterintelligence Scope Polygraph Test Questions

C16.3.2.1. Relevant. This question pertains directly to the issues being tested. The relevant question tests the possible direct involvement of the examinee. (See figure C16.F2.)

Figure C16.F2. Samples of Relevant Questions for a Counterintelligence Scope Polygraph

Have you had any unauthorized foreign contacts? Have you provided classified information to an unauthorized person?
--

C16.3.2.2. Probable-Lie Comparison 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. 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. The exclusionary and screening comparison questions are the two types of PLC questions used within the federal government. (See figure C16.F3.)

Figure C16.F3. Sample of a Probable-Lie Comparison Question

Did you ever say anything about someone that wasn't true?
---

C16.3.2.3. Sacrifice Relevant. This is the first question of the test format that refers to the relevant issue, and it prepares the examinee for the introduction of the relevant questions. The question addresses the relevant issue and should not exceed the scope of the relevant issue. (See figure C16.F4.)

Figure C16.F4. Sample of a Sacrifice Relevant Question for a Counterintelligence Scope Polygraph

Regarding the security questions, do you intend to answer each question truthfully?

C16.3.2.4. Irrelevant Question. The irrelevant question is the first question asked during the data-collection phase. It may also be asked in other positions on the chart. It is designed to allow the orienting response to habituate before a scoreable question is asked, and it can be used to establish homeostasis when an artifact occurs on the chart. Irrelevant questions should be unrelated to the issues being tested. Irrelevant questions are not scored. Several irrelevant questions may be reviewed and used as needed. (See figure C16.F5.)

Figure C16.F5. Samples of Irrelevant Questions

Are you now in Alabama?  
Are you sometimes called Tom?

#### C16.4. DATA COLLECTION

C16.4.1. Question Format. 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. However, the exact sequence in which the questions are to be asked in the data collection phase is not revealed. The test format should begin with an irrelevant question. Irrelevant questions may be inserted into each chart as needed. A sacrifice relevant question is always included in the test format. Two to five relevant and two to four comparison questions may be used. If a single relevant-question test is required, the You-Phase ZCT format should normally be used. (See figure C16.F6.)

Figure C16.F6. Data Collection Sequence for a Counterintelligence Scope Polygraph

I	Are the lights on?
SR	Regarding the security questions, do you intend to answer each question truthfully?
C	Did you ever lie to a personal friend?
R	Have you had any unauthorized foreign contacts?
R	Have you engaged in espionage against the US?
C	Did you ever take credit for something you did not do?
R	Have you committed sabotage against the US?
R	Have you provided classified information to any unauthorized person?
C	Did you ever cheat in school?
R	Have you ever deliberately damaged any US Government information system?
C	Did you ever violate your own code of ethics?

C16.4.2. Question Rotation. During the second CSP 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 CSP chart. During the third chart, relevant and comparison questions may be asked in a mixed, reversed, or initial order sequence. These procedures reduce the possibility of response patterns due to the examinee's knowledge of the question sequence.

C16.4.3. Chart Requirements. In most instances, the collection of three charts (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 circumstance will a sixth chart be conducted. 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.

C16.4.4. Conduct of Acquaintance Test. Normally, the ACQT should be collected as the first chart of this examination. It is conducted in part to acquaint the examinee with the PDD procedures. The known-solution ACQT is the only ACQT taught by DoDPI.

## C16.5. TEST DATA ANALYSIS

C16.5.1. Numerical Analysis. The 7-position scale is used to evaluate test data.

C16.5.2. Spot Analysis. The 7-position numerical evaluation system analyzes the physiological responses recorded on the chart by comparing the relevant questions to the larger response by component tracing of the adjacent comparison questions.

### C16.5.3. Opinion Rendering Criteria

C16.5.3.1. Significant Response. To render an opinion of SR on the CSP, 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.

C16.5.3.2. No Significant Response. To render an opinion of NSR on the CSP, there must be a plus three (+3) or greater in every overall vertical spot.

C16.5.3.3. No Opinion. If based upon physiological responses to the applied stimuli an opinion of SR or NSR cannot be rendered, the opinion is NO. When appropriate, an administrative opinion should be rendered.

C16.5.4. 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, etc., are appropriate.

## C17. CHAPTER 17

### FIELD RANK ORDER SCORING SYSTEM

#### C17.1. SCOPE

The Field Rank Order Scoring System is a form of ROSS that identifies the three most significant responses during a PDD series. This guide describes procedures for the Field Rank Order Scoring System that may be used as an optional procedure to evaluate R/I counterintelligence scope PDD examinations.

#### C17.2. BACKGROUND

The Field Rank Order Scoring System, sometimes referred to as the "High Three," was developed as a supplementary method of evaluating R/I PDD examinations. Its use began prior to the 1970s when the first literature was published regarding rank order analysis of the electrodermal tracing.

#### C17.3. PURPOSE

The purpose of the Field Rank Order Scoring System is to provide decision support to a PDD examiner's global evaluation of R/I test data to supplement an opinion of NSR. The primary method of test data analysis of R/I test data is global evaluation. The Field Rank Order Scoring System provides a secondary method of numerical analysis for the R/I screening test format, but the numbers do not drive the opinion since numerical cut-off scores have not been established. A plan of instruction for the Field Rank Order Scoring System is on file with Instruction Division, DoDPI.

#### C17.4. PROCEDURES

C17.4.1. The pneumograph, electrodermal, and cardiovascular tracings are analyzed separately and given equal emphasis in the decision process.

C17.4.2. The highest three levels of responsiveness to relevant questions are identified in each parameter.

C17.4.3. A value of three (3) is assigned to the relevant question exhibiting the most responsiveness, a value of two (2) is assigned to the next most responsive relevant question, and a value of one (1) is assigned to the third most responsive relevant question.

C17.4.4. Responses that are equal receive the same value.

C17.4.5. Since one or more relevant questions are repeated on a chart during the R/I format, two presentations of the same relevant question may receive a value.

C17.4.6. If only two levels of responsiveness are observed within a parameter, the most responsive presentation will receive a value of three (3) and the next most responsive presentation will receive a value of two (2).

C17.4.7. If no appreciable difference in responsiveness is observed in a particular parameter, that parameter is not scored.

C17.4.8. After all parameters are evaluated, the scores of each relevant question are vertically totaled.

**C17.5. SAMPLE OF A COMPLETED SCORE SHEET**

C17.5.1. Relevant questions are listed horizontally across the top. The parameters are listed vertically: pneumograph (P), electrodermal (E), and cardiovascular (C). (See figure C17.F1.)

Figure C17.F1. Sample of a Completed Score Sheet for the Field Rank Order Scoring System

CHART # 1	1	2	3	4	2	4	
P							
E			3		2	1	
C		3		2			
SUBTOTALS		3	3	2	2	1	

CHART # 2	4	1	3	2	1	3	
P			2	3	1		
E	3	3	3		3		
C	3						
SUBTOTALS	6	3	5	3	4		

QUESTION #	1	2	3	4			
SUBTOTALS	7	8	8	9			

C17.5.2. No appreciable difference in responsiveness was observed in the pneumograph parameter, chart #1, and was not scored.

C17.5.3. Only two levels of differential responsiveness were observed in the cardiovascular parameter, chart #1.

C17.5.4. The electrodermal responses, chart #2 were equal to relevant question #4, the first and second presentations of relevant question #1, and the first presentation of relevant question #3.

C17.5.5. On chart #2, only one question, relevant question #4, was deemed responsive in the cardiovascular parameter.

## C18. CHAPTER 18

### COUNTERMEASURES

#### C18.1. SCOPE

This guide establishes essential elements for the federal government where indications of Psychophysiological Detection of Deception (PDD) Countermeasure(s) (CM) are observed. The procedures described are taught at DoDPI.

#### C18.2. BACKGROUND

Reports of CM date to the earliest use of PDD testing. University research beginning in the 1970s suggested subjects who received detailed information along with personal training in PDD CM could significantly affect the accuracy of the examination process. Prior to the mid-1990s, PDD examiners seldom received CM training and were not equipped to meet the threat.

#### C18.3. PROCEDURES

C18.3.1. Pretest Phase. To assist in conducting a thorough examination, an examiner should elicit information from the examinee during the pretest interview regarding the examinee's knowledge of the polygraph process. This should include any exposure to, knowledge of, and/or PDD advice received, as well as whether the subject has conducted any research or inquiries into PDD procedures. This discussion should be accomplished in a non-accusatory manner consistent with DoDPI instruction.

In an effort to deter an examinee from employing CM, it is not appropriate to routinely discuss specific CM during the pretest interview. Such discussion may suggest options to an examinee or create an outside issue.

C18.3.2. Data Collection. When CM are suspected, PDD testing should routinely continue until the testing protocol has been completed. Completion of the test series may allow for sufficient physiological data to identify patterns necessary to establish or refute the employment of CM. If an examination is terminated prior to completion of the protocol due to suspected CM, the examiner should provide technical comments explaining the rationale or circumstances.

C18.3.2.1. If an examiner suspects CM were employed, the examiner may conduct specialized tests (e.g. Yes Test, Concealed Information Test, etc.) designed to confirm the presence of CM. Examiners will 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.

C18.3.2.2. These specialized tests are to be used solely in determining whether CM were employed and must be conducted in accordance with DoDPI curriculum. No conclusion or opinion as to the truthfulness of the original testing issue may be reached based on a CM test series.

### C18.3.3. Employment of Movement Sensor Device(s) (MSD).

C18.3.3.1. A MSD is designed to detect covert movements during a PDD examination.

C18.3.3.2. A MSD shall be used in all PDD examinations, when available.

C18.3.3.3. When a MSD is employed, sensitivity settings for the component should allow for optimum tracings.

C18.3.4. Introduction of the MSD. For most specific issue, applicant, and employee screening PDD examinations, a brief introduction of the MSD may be made during the PDD process. Other discussions about the MSD should be completed as necessary.

C18.3.5. MSD Evaluation Procedures. The timing of deliberate manipulations are a consideration (i.e., at comparison questions or at irrelevant questions) when attempting to identify the existence of CM during a PDD 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.

C18.3.6. MSD Training. Examiners should be trained for the type MSD that is being used. This training should be sufficient to assure the examiner is proficient in the use of the MSD and with interpreting the data collected.

### C18.3.7. Opinions.

C18.3.7.1. A significant response or deception indicated decision shall only be made in the presence of CM when there are sufficient uncontaminated data to support such a decision.

C18.3.7.2. A no significant response or no deception indicated decision shall not be made in a test series in the presence of CM.

C18.3.7.3. A no opinion decision may be appropriate when data are contaminated by CM. The continued lack of cooperation by an examinee employing CM may be administratively reported as Purposeful Non-Cooperation (PNC).

## C18.4. CM TRAINING

All examiners should attend a comprehensive PDD CM course sponsored by DoDPI within two year of graduation from initial PDD training. Thereafter, examiners should attend a minimum of four hours of refresher instruction in CM every two years.

#### C18.5. DODPI REVIEW OF EXAMINATIONS

At each agency's discretion, PDD examinations containing suspected CM may be forwarded to DoDPI for a detailed evaluation.

#### C18.6. CM DATABASE

Agencies are encouraged to participate in the DoDPI CM data collection effort and provide DoDPI with all confirmed CM examinations.

#### C18.7. PDD CHART RETENTION

Agencies should retain the test data (charts) and technical reports collected during all PDD examinations.