

## **Homeland Security Supplemental Topics Exam Summary:**

### *Undergraduate and Graduate Levels*

Peregrine Academic Services (PAS) provides assessment services for performing direct assessment of learning outcomes in a range of academic disciplines. The online exams are used to evaluate retained student knowledge in relation to the academic program's learning outcomes.

**This document outlines the Homeland Security (HLS) topics which may be used to complement the Business Administration or Public Administration comprehensive exams. These advanced topics may be used for both undergraduate and graduate students.**

These supplemental HLS topics are designed for use by US-based schools and programs.

PAS places a high priority on ensuring the validity and reliability of the assessment services. These practices begin at the design stage and continue through beta-testing, and with ongoing regularly scheduled quality reviews. A description of the approach used to ensure ongoing validity and reliability is provided at the end of this document.

The exams include 10 questions for each supplemental topic and each exam is unique as questions are selected at random from the test bank of over 50 questions per topic. Institutions select the topic areas to be included in the exam to match the design of their curriculum.

This document provides information on:

- Topic areas and Subjects covered within each.
- Example questions.
- Assessment Service Validity and Reliability.

The Topics are:

Investigation  
Policy and Law  
Risk Management  
Terrorism

## **Topic: Investigation**

### **Subjects**

- Constitutional Principles
- Crisis Management
- History
- Law Enforcement
- Legal Concepts

### **Example Questions**

The 9-11 commission identified the need for greater \_\_\_\_\_ as a key component in the prevention of future terrorism incidents.

- A. information sharing
- B. law enforcement powers
- C. security
- D. oversight authority

**Correct Response: A**

\_\_\_\_\_ is a legal standard of due process that is applied to the freedom of speech and connected to the application of the Patriot Act.

- A. Strict scrutiny
- B. Posse Comatitus
- C. Alliances
- D. Cooperative alliances

**Correct Response: A**

## **Topic: Policy and Law**

### **Subjects**

- Bureaucracy
- Criminal Procedure
- Federal Actions
- International Law
- Legislation

### **Example Questions**

The application of the \_\_\_\_\_ in the fight against terrorism has led to confusion due to the non-state nature of terrorists.

- A. crime prevention through environmental design
- B. laws of war
- C. anti domestic terrorist actions
- D. community crime prevention techniques

**Correct Response: B**

The power of the investigative \_\_\_\_\_ was expanded as a result of the Patriot Act.

- A. search warrant
- B. wiretap
- C. subpoena
- D. writ

**Correct Response: C**

## **Topic: Risk Management**

### **Subjects**

- General Operations
- International Response
- Management and Finance
- Security Development
- The Patriot Act

### **Example Questions**

The analysis and dissemination of data related to terrorist related incidents is a significant component of \_\_\_\_\_ policing.

- A. intelligence led
- B. criminal conduct
- C. clandestine intelligence
- D. terrorist lead

**Correct Response: A**

The US Patriot Act eliminated the need for \_\_\_\_\_ when a federal investigation was for the purposes of gathering intelligence.

- A. reasonable suspicion
- B. probable cause
- C. totality of the circumstances
- D. intelligence led policing

**Correct Response: B**

## **Topic: Terrorism**

### **Subjects**

- Biological Weapons
- Counterterrorism
- History
- International Response
- Organization and Administration

### **Example Questions**

In an attempt to prevent state sponsored terrorism (where other countries will actively sponsor/support), the US Government has created sanctions to include \_\_\_\_\_ against the countries.

- A. deportation of their citizens
- B. a ban on weapons and weapon related sales
- C. governmental oversight of their actions
- D. prohibiting any imports from the countries

**Correct Response: D**

The unlawful use of force that is connected to another foreign power is a good example of \_\_\_\_\_.

- A. domestic terrorism
- B. international terrorism
- C. online terrorism
- D. cyber terrorism

**Correct Response: B**

## Assessment Service Validity and Reliability

### Introduction

The programmatic assessment services provided by Peregrine Academic Services (PAS) are used to assess retained knowledge of students at various academic degree levels. Schools deploy these services to evaluate the effectiveness of their academic programs, identify areas for improvement, and demonstrate program outcomes to external stakeholders.

PAS places a high priority on ensuring the validity and reliability of the assessment services. These practices begin at the design stage and continue through beta-testing, and with ongoing regularly scheduled quality reviews. The following outlines the approaches used to ensure ongoing validity and reliability.

**Validity** refers to the extent to which the test banks and the services measure the phenomena under consideration.

**Reliability** refers to the extent to which the exam results are repeatable and therefore data sets can be compared over time.

### Design Features that Impact Validity and Reliability

The following features apply to all assessment services.

- Exam scoring is 100% objective using automated marking.
- Each exam viewed by a student is unique using a random selection of questions from the test bank in random topic order.
- Timed response periods for questions. When the user navigates away from the exam screen, the screen fades, a message appears informing the user that he/she has left the exam window and the questions are timed.
- Students are unable to copy/paste from the exam window.
- The exam services meet the security requirements for Management of Information Technology (MIS) Sarbanes-Oxley (SOX) compliant organizations.
- Abandoned exams are excluded from summary reports.

## **Ensuring Ongoing Validity and Reliability**

### **Validity**

To ensure test bank validity, the following measures were adopted when the initial test banks were created. The same principles are used with subsequent changes to the test banks.

- The specific accreditation or certification requirements related to learning outcomes evaluation were used to determine the topics and subjects for the test banks.
- Current teachings for each topic were considered regarding the foundational level of each test bank.
- Exam questions were written and reviewed by academic professionals within each discipline. Similar subject matter experts are used with subsequent editing and for new questions.
- Each topic has questions designated for 4-8 subjects per topic to help ensure appropriate breadth of coverage and allow for specific learning outcomes measurement.
- Exam responses are either correct or incorrect with only one possible correct choice. Scores are determined by summarizing the percent correct: per subject, per topic, and by total score.

### **Reliability**

PAS contracted with external experts to design a comprehensive and statistically sound approach to measuring assessment service reliability. The result is that each year, a *Reliability Report* is generated for each assessment service. The report generates data for several reliability metrics and the data for each are compared with acceptability criteria to determine which test questions should be modified or replaced. Subject matter experts in the field are then contracted to modify/replace the targeted questions. Hence, the assessment service is regularly reviewed and improved to ensure ongoing reliability.

Reliability is determined by measuring *Item Difficulty*, *Item Discrimination* and *Question Interchangeability*.

**Item Difficulty** refers to percentage of students who answer questions correctly. Data are generated by topic and for each individual question. The target Item Difficulty is 60 percent correct with an acceptable range of 35 – 80 percent.

**Item Discrimination** refers to how well a question distinguishes between those students with more knowledge (higher overall exam scores) from those with less knowledge. Two measures are used: *Discrimination Index* and *Point-Biserial Correlation*.

For a given question, the Discrimination Index compares the scores of students with high overall test scores with students with low overall test scores. The scale is -1 to +1, with higher values indicating that a given question better distinguishes between high and low performing students. A value of  $\geq 0.20$  is considered acceptable.

Point-Biserial Correlation is equal to the Pearson's Correlation Coefficient between the scores on the entire exam and the scores on a specific question. A score of  $\geq 0.10$  is considered acceptable.

When assessing the quality of questions, both the Discrimination Index and the Point-Biserial Correlation Coefficient are reviewed.

**Question Interchangeability** refers to the ability to substitute a question in the test bank with another without significantly affecting the total score that an individual would receive on the exam. This is determined using Cohen's Effect Size  $d$  calculated based on a two-tailed  $t$ -test comparing the total score for all students who had that question in their exam versus the total score of the students who did not have that question in their exam. The scale is 0-1.0 and a score of  $< 0.20$  is considered acceptable.