Institute of Systems Science  
National University of Singapore

NICF- AISP Qualified Information Security Professional Course

Sample Entrance Test

Introduction

The Institute of Systems Science (ISS) of the National University of Singapore (NUS) recruits candidates of the NICF- AISP Qualified Information Security Professional Course. A significant method used to assess applicants is their performance in an entrance test. This is a closed-book test that takes 40 minutes to complete, and consists of thirty multiple-choice questions. It aims to validate the academic capability of applicants in the context of the course they have applied for.

The test consists of two sections as follows:

A. **Information Technology (IT) Capabilities.** The 15 questions in this section focus on the basic IT knowledge of the candidate in the following areas:
   - IT infrastructure such as networking, operating systems, and so forth
   - Internet Protocols
   - Software development

B. **Information Security Capabilities.** The 15 questions in this section focus on the basic information security knowledge of the candidate in the following areas:
   - Security engineering
   - Information security risk management
   - Operations security
   - Cryptography

Sample questions from each section are provided in the following pages.
SECTION A: Information Technology (IT) Capabilities

1) Cohesion refers to the degree to which _________________________.
   
   A. a module can be written more compactly.
   B. a module is able to complete its function in a fast manner.
   C. the elements of a module belong together.
   D. a module is connected to other modules and the outside world.

2) What testing is typically performed during the coding step?:
   
   A. Integration Testing
   B. Unit testing
   C. User Acceptance Testing
   D. Regression Testing

3) Service Oriented Architecture (SOA) is ________________:
   
   A. Strongly Coupled
   B. Loosely Coupled
   C. Strongly Cohesive
   D. Loosely Cohesive

4) Which one of the following protocols is not used on the internet?:
   
   A. TCP/IP
   B. DHCP
   C. HTTPS
   D. None of the above
5) Which of the following does DHCP (Dynamic Host Configuration Protocol) provide to the client?:

A. Hostname
B. MAC address
C. IP Address
D. All of the above.

6) What is the typical TCP port number used by SMTP?:

A. 22
B. 25
C. 35
D. 80

7) Which of the following command removes a relation from a SQL database?:

A. Delete
B. Clear
C. Remove
D. Drop table

8) Which one of the following best describes a network operating system?:

A. Hardware needed for the operation of a network.
B. A configuration of devices to support network operation.
C. Software used to protect microcomputers on a network from virus infection.
D. Software that controls network communications and the sharing of resources.
SECTION B : Information Security Capabilities

9) Which of the following are true about Firewalls?:

   I. Can be either a hardware or software device.
   II. Follows a set of rules.
   III. Can be configured to drop packets.

   A. I and II only.
   B. I and III only.
   C. II and III only.
   D. I, II and III.

10) Which of the following would help to detect fraud?:

   A. Segregation of duties.
   B. Least Privilege.
   C. Need-to-Know.
   D. Rotation of duties.

11) Which of the following statements concerning information security risks is not true?:

   A. Threat sources are always external to the organization.
   B. Most threats are beyond the control of an organization.
   C. Most vulnerabilities are within the control of an organization.
   D. A threat that does not have a corresponding vulnerability may not result in a risk.

12) What is the process of verifying a login ID and password known as?:

   A. Identification
   B. Configuration
   C. Authentication.
   D. Authorization

13) In which of the following does WPA2 provide security?:

   A. Wireless LAN
   B. Bluetooth
   C. Ethernet
   D. All of the above.
14) Which of the following are insecure protocols?:

A. Telnet.
B. FTP.
C. Trivial FTP.
D. All of the above.

15) Which of the following are hash algorithms?:

I. MD5
II. AES
III. RSA
IV. SHA-512

A. I and II only.
B. II and III only.
C. I and IV only.
D. III and IV only.

16) Which of the following is an attack that renders computer resources unavailable to its authorized users?:

A. Meet-in-the-middle attack.
B. Man-in-the-Browser attack.
C. Phishing attack.
D. Denial of Service attack.