

《Web Security》期末试题答案(A)

Part 1. Explanation of Terms, 30 points

NOTE: Give the definitions or explanations of the following terms, 5 points for each.

(1) Data Integrity

Integrity is violated when a message is actively modified in transit. Information security systems typically provide message integrity in addition to data confidentiality

(2) Information Security Audit

An information security audit is an audit on the level of information security in an organization

(3) PKI

PKI provides well-conceived infrastructures to deliver security services in an efficient and unified style. PKI is a long-term solution that can be used to provide a large spectrum of security protection.

(4) X.509

The ITU-T recommendation X.509 defines a directory service that maintains a database of information about users for the provision of authentication services...

(5) Denial-of-Service Attack

DoS (Denial of Service) is an attempt by attackers to make a computer resource unavailable to its intended users.

(6) SOA(Service-Oriented Architecture)

is a set of principles and methodologies for designing and developing software in the form of interoperable services. These services are well-defined business functionalities that are built as software components (discrete pieces of code and/or data structures) that can be reused for different purposes. SOA design principles are used during the phases of systems development and integration

Part 2. Brief Questions, 40 points

NOTE: Answer the following HOW TO questions in brief, 8 points for each.

(1) Asymmetric Cryptographic Method.

(2) MD5: How to be used for password protection.

(3) ARP Poisoning: How to carry out an ARP Cache Poisoning Attack.

(4) Vulnerabilities of Firewall: How to penetrate a firewall, illustrated with at least 3 examples.

- (5) Security in Cloud Computing: How to discern the Security in Cloud Computing in your point of view.

Part 3. Essay Questions, 30 points

NOTE: Discuss the following questions in detail, 10 points for each.

- (1) Discuss some PORT SCAN Software you ever used, including the usage and the running result analysis.
- (2) Discuss the mechanisms of Buffer Overflow in illustration of some real example.
- (3) Select one from the OWASP's Top Ten Threatens of Web Applications 2010 and discuss the mechanisms, citing in illustration.

NOTE: Questions in Part 2 and Part 3 are designed for freely discussing.

