Exam. Code : 217902
Subject Code : 7036

M.Sc. Information & Network Security 2nd Semester

NETWORK SECURITY PRACTICES

Paper–II

Time Allowed—3 Hours] [Maximum Marks—100

Note :— Attempt any **five** questions. All questions carry equal marks.

1. Differentiate between the following :

   (a) Modification and Fabrication. 10

   (b) Confidentiality and Non-repudiation. 10

2. What are different types of models for network security ? Explain each by taking example. 20

3. State and explain the following :

   (a) Play fair Ciphers 10

   (b) Triple DES. 10

4. What is meant by linear cryptanalysis ? How it differs from steganography ? Explain. 20

5. (a) How random number generators are helpful in ensuring confidentiality. Justify by taking suitable examples. 10

(b) What is meant by key management ? Explain key management of RSA algorithm. Also take an example of RSA to justify. 10

6. Explain the following by taking example :

(a) Key exchange algorithms 10

(b) Principles of cryptography. 10

7. (a) What are various functions for authentication in information security ? 10

(b) Demonstrate the working of Authentication codes. 10

8. Write short notes on the following :

(a) Hash function for authentication. 5

(b) Web security 5

(c) CAST-128 5

(d) Caesar Cipher. 5

Exam. Code : 217902
Subject Code : 7037

M.Sc. Information & Network Security 2nd Semester
COMPUTER FORENSIC FUNDAMENTALS
Paper–III

Time Allowed—3 Hours] [Maximum Marks—100

Note :— Attempt any **five** questions. All questions carry equal marks.

1. What are Forensics ? Why is computer an easy tool for cyber forensics ? Explain.

2. What is Spyware ? How is it detected and removed ? Explain.

3. What are Biometric systems ? Explain the working of any one with suitable example.

4. How Cybercrime can be detected ? Explain one of the important techniques for the same.

5. What is Data Recovery ? Why is it important ? Explain the process of Data Recovery.

6. What is Cyber evidence ? How is it collected ? Explain one of the methods.

7. What is an Intrusion ? How is it detected and prevented ? Explain.

8. Write notes on :

   (a) System Vulnerabilities

   (b) Cyber detectives.

Exam. Code : 217902
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M.Sc. Information & Network Security 2nd Semester

SECURE CODE DEVELOPMENT

Paper–IV

Time Allowed—3 Hours] [Maximum Marks—100

Note :— Attempt any **five** questions. All questions carry equal marks.

1. What is a software development life cycle ? Discuss various phases of waterfall model in detail.

2. Write short notes on :

   (a) Rapid Prototyping

   (b) Incremental development.

3. Discuss various security issues during Software requirement specification and design phase of software development.

4. Briefly discuss :

   (a) Proactive security development process

   (b) SD3

5. Differentiate between :

   (a) Authentication and Authorization

   (b) Event based modeling and threat modeling.

6. Write short notes on :

   (a) Secure software installation

   (b) Writing security documentation.

7. Briefly explain :

   (a) Security testing

   (b) Security code review.

8. Discuss various security techniques used of creating a secure system.