B.Sc(ECS)- III (Semester – VI) Examination
Computer Science (New w.e.f. Nov 2021) New CBCS
System Security (paper– XIV)
Question Bank 80 marks

Question For 2 Marks

1) Define computer security
2) What is a digital signature?
3) What is a public-key certificate?
4) What are four means of authenticating a user's identity?
5) Define the three classes of subject in an access control system?
6) Define the terms database management system and query language?
7) What is a "logic bomb"?
8) What are typical phases of operation of a virus or worm?
9) Define a distributed denial-of-service (DDoS) attack.
10) Define a reflection attack.
11) What is System Security?
12) What is mean by Access Control Principles
13) What is a message authentication code?
14) What are two common techniques used to protect a password file?
15) What is an access right?
16) What is a protection domain?
17) What is Database Security?
18) What is mean by Attacks?
19) Define the term Viruses?
20) Define the term Spyware
21) What is mean by Phishing?
23) Define Flooding Attacks
24) Define Cloud Security
25) What is mean by Database Access Control?
26) Define Inference
27) Define Statistical Databases
28) Define Database Encryption
29) Define Subjects and Objects
30) What is mean by Access Rights?
31) What is mean by Discretionary Access Control?
32) What is mean by Application-Based Bandwidth Attacks?
33) What is mean by Reflector Attacks?
35) Define Amplifier Attacks?

36) How Can i Avoid Spyware?
37) What Is Authenticode?
38) Explain About User Security?
39) Define Rootkits.
40) Define Viruses.

Question for 3 marks

1) Explain Database Encryption?
2) Explain Flooding Attacks?
3) Explain Public-Key Encryption?
4) Explain Denial-of-Service Attacks?
5) Explain Countermeasures?
6) Explain Propagation?
7) Explain Trojans?
8) Explain Payload–System Corruption?
9) Explain Payload–Attack Agent–Zombie?
10) Explain Bots?
11) Payload– Information?
12) Theft– Keyloggers?
13) Explain Flooding Attacks
14) Explain Distributed Denial-of-Service Attacks
15) Explain Responding to a Denial-of-Service Attack

Question For 4 Marks

1) What are two common techniques used to protect a password file?
2) Explain the Means of Authentication?
3) What is a relational database and what are its principal ingredients?
4) In the context of access control, explain a subject and an object?
5) List and explain four common techniques for selecting or assigning passwords?
6) Explain the difference between a simple memory card and a smart card.
7) Explain Role - Based Access Control in access control?
8) Explain The Need for Database Security?
9) Explain Social Engineering–SPAM E-mail?
10) Explain Flooding Attacks with types of Flooding Attacks
12) Explain Database Access Control in database Security

Question For 5 Marks

1) Explain Message Authentication and Hash Functions in detail?
2) Define the User Authentication? Explain Electronic Identity Cards and smart card in Token-Based Authentication?

3) Explain Access Control Context and Access Control Policies in Access Control Principles?
4) What is Confidentiality? Explain Confidentiality with Symmetric Encryption?
5) What is Authentication? Explain Password-Based Authentication?
6) Explain the Need for Database Security?
7) Explain Defenses Against Denial -of-Service Attacks,\
8) Explain Propagation–Vulnerability Exploit–Worms
9) Explain UNIX File Access Control
10) Explain Propagation– Infected Content–Viruses
11) Explain Payload–Stealthing–Backdoors?
12) Explain Cloud Security in database security

Question For 8 Marks

1) What is biometric authentication? Explain Physical Characteristics Used in Biometric Applications and Operation of a Biometric Authentication System.
2) What is Malicious Software? Explain Types of Malicious Software?
3) Explain Denial-of-Service Attacks in detail?
4) What is Confidentiality? Explain Confidentiality with Symmetric Encryption?
5) Explain DBMS Architecture with suitable diagram.
6) Explain Reflector and Amplifier Attacks in details.
7) Explain Relational Databases with example in database Security
8) Explain Case Study: RBAC System for a Bank in Access Control
9) Explain Distributed Denial-of-Service Attacks in detail
10) Explain Database Access Control in database security in detail?
11) Define Password Explain Password-Based Authentication
12) What is Authentication protocol? Explain Electronic Identity Cards with digram?

SLR-DD-56

Seat No.	

Set P

B.Sc. (E.C.S.) (Semester-VI) (New) (CBCS) Examination: Oct/Nov-2023
System Security (ECS0602)

Day & Date: Tuesday, 21-11-2023 Max. Marks: 80
Time: 03:00 PM To 06:00 PM

Instructions: 1) All questions are compulsory.
2) Figures to right indicate full marks.

Q.1 A) Multiple choice questions. **10**

1) Which of the following is not a principle of data security?
   a) Data Confidentiality b) Data Integrity
   c) Authentication d) None of the above

2) A mechanism used to encrypt and decrypt data _____.
   a) Cryptography b) Algorithm
   c) Data flow d) None of these

3) To encrypt the plaintext, a cryptographic algorithm works in combination with a key _____.
   a) Word, number, or phrase b) Special Symbols
   c) Function Keys d) All of these

4) Public key cryptography is a _____ cryptosystem.
   a) Symmetric
   b) Asymmetric
   c) Symmetric & Asymmetric both
   d) None of these

5) Which of the following are forms of malicious attack?
   a) Theft of information b) Modification of data
   c) Wiping of information d) All of the mentioned

6) Which of the following is the least secure method of authentication?
   a) Key card b) Fingerprint
   c) retina pattern d) Password

7) Which happens first authorization or authentication?
   a) Authorization
   b) Authentication
   c) Authorization & Authentication are same
   d) None of the mentioned

8) A password that is the same for each logon is called a: _____.
   a) Dynamic password b) Static password
   c) Passphrase d) One-time password

9) Which of the following malware do not replicate or reproduce through infection?
   a) Worms b) Trojans
   c) Viruses d) Rootkits

10) Which malware has Short for "robot network"?
   a) ronets b) botnets
   c) botwork d) rowork

B) Fill in the blank/Definition/One sentence answer/One word answer/ Give the name/ Predict the product etc. **06**

1) What is another type of Denial of server attack?
2) Malware is a short form of?
3) What is the RBAC System?
4) The process of verifying the identity of a user.
5) What is a computer called when it is infected with a malware bot?
6) Name the malicious software which keeps watch on your activities.

Q.2 Solve any Eight of the following. **16**

a) What is Spyware?
b) Explain about Digital Signature.
c) What is Discretionary Access Control?
d) Explain about Database Management Systems.
e) What is Buffer Overflow Attack?
f) What is phishing?
g) What is Inference in database security?
h) What are the types of malicious software?
i) What is Distributed Denial-of-Service Attack?
j) What are Rootkits?

Q.3 A) Attempt any Two of the following. **10**

1) Discuss security issues with Biometric Authentication Systems.
2) Explain Remote User Authentication.
3) Explain payloads - Keyloggers.

B) Short note/Solve **06**

Explain in detail about Reflector and Amplifier Attacks.

Q.4 A) Attempt any Two of the following. **08**

1) What are Malicious Software? Explain any four types in detail.
2) Explain Password-Based Authentication with suitable examples.
3) Explain Propagation of Viruses.

B) Describe/Explain/Solve **08**

What are means of Authentication & Security issues for User Authentication.

Q.5 Attempt any Two of the following. **16**

a) What are payloads? Explain payloads Zombie, Bots, Keyloggers & Backdoors.
b) What is the importance of Database Security? Explain Database Encryption & Cloud Database Security.
c) What is Access Control? Explain about UNIX File Access Control.