

unit-1 (Introduction)

- ① meaning of computer security
- ② what are information security and computer security?
- ③ what are computer crime?
- ④ Explain different elements in computer security?
- ⑤ what are computer criminals and methods of Defense.
- ⑥ Difference between IS & CS & Network security.

unit-2 (Cryptography)

① AES Encryption Algorithms

② public key encryption with example. merits and demerits of public key.

③ use of Encryption?

④ what are the data encryption standards?

⑤ Explain Elementary cryptography
→ substitution ciphers.
→ transpositions.

⑥ Making "Good encryption algo".

Unit-3 > program security

(i) what do you mean by secure program?

(ii) what are :-

→ non-malicious program errors.
→ viruses and other malicious code

→ controls Against program threats.

(iii) what is operating system security.

what are OS protected objects and methods of protection memory and address protection.

(iv) what are Files protection Mechanism. in details.

(v) How is user authentication design - ed in Trusted O.S.?

(vi) what are operating system security policies?
Explain models of O.S security.

(vii) what are trusted O.S design?

(viii) Assurance in trusted O.S, with

implementation examples.

Unit 4 - (Database security)

① what do you mean by Database security.

② Explain some aspects of Reliability and Integrity in database security.

③ what are security requirements in DB security?

④ Explain aspects of : sensitive data
:- Inference :- multilevel database
⑤ proposals for multilevel security.

unit-5 (security in networks)

① Threats in Network.

② what are network security control.

③ Explain :- Firewalls .

→ Intrusion Detection systems.

→ Secure Email. (Email security)

→ DDOS (Denial of service)

④ what are network security protocol.
Explain :

- ① TCP/IP model
- ② OSI model. (with figure)

⑤ Explain security at the Application layer:
→ PGP and S/MIME

⑥ Explain security at transport layer:
→ SSL and TLS

⑦ Explain security at network layer:
→ IPsec

unit - 6 (Administered security)

① Explain about security planning in administering security.

② Explain Risk analysis.

③ What are organizational security policies?

④ Explain about physical security.

⑤ What are legal privacy and ethical

Issues in computer security.

(VI) ways to protecting programs and data.

(VII) what are information and the law of computer security.

(VIII) Explain Rights of Employees & employers.

(IX) Explain about software failures and computer crime.

Unit - 7 (Legal and ethical issue)

(I) what are protection of data & information laws.

(II) what are the types of ethical issues :

→ personal privacy.
→ Access right.

(III) Explain about :

→ Harmful actions.
→ Patents
→ copyrights.
→ Trade secrets.

- Liability
- Privacy
- Access costs
- Data gathering