

BT-8/J-25

48249

**CYBER SECURITY**

Paper—OE-CS-402A

Time Allowed : 3 Hours]

[Maximum Marks : 75

**Note** : Attempt **five** questions in all, selecting at least **one** question from each Unit. All questions carry equal marks.

**UNIT-I**

1. (a) Explain the fundamentals, nature and scope of Cyber Crime.. 8  
(b) Discuss the differences between Cyber Crime against individuals and Cyber Extortion with suitable examples. 7
2. (a) What are Stream and Block Ciphers ? Compare them with examples. 8  
(b) Explain Shannon's theory of confusion and diffusion in Cryptography. 7

**UNIT-II**

3. (a) Describe the working of the MD5 message Digest algorithm. 8  
(b) What are Digital signatures ? How are they verified using DSS ? 7

4. (a) Explain the Kerberos authentication protocol. 8  
(b) What is S/MIME ? How does it ensure email Security ? 7

### UNIT-III

5. (a) Define Passive and active Cyber attacks. How can Organizations defend against them ? 8  
(b) Write short notes on the following: 7  
(i) Backups and Archival.  
(ii) OS Security.
6. (a) Explain the working of a firewall with a neat diagram. 8  
(b) What are Intruders and Viruses ? How do Firewalls help in controlling them ? 7

### UNIT-IV

7. (a) Define Digital Forensics. Explain the need and process of Digital evidence collection. 8  
(b) Discuss the historical development and significance of Computer Forensics. 7
8. (a) Describe the Legal perspective on Cybercrime under the Indian IT Act. 8  
(b) What is Cyber terrorism ? How is it dealt with in India ? 7