

Roll No. ....

Total Pages : 03

BT-8/D-24

48249

CYBER SECURITY

OE-CS-402A

Time : Three 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) What are the fundamentals of Cyber-Crimes ?  
Explain different types of Cyber-Crimes. 8
- (b) How crime against individual happens ? Discuss  
about cyber extortion and cyber terrorism. 7
2. (a) Discuss about stream and block ciphers. Explore  
the principles of block cipher. Explain Fiestal  
structure. 8
- (b) What are the strength of Data Encryption Standards  
(DES) ? Explain differential and linear crypt analysis  
of DES. 7

## Unit II

3. (a) What is MD5 algorithm used for ? Write the steps followed by MD5 algorithm. 3×5=15
- (b) Discuss the Components and Process Flow of Secure Hash Algorithm (SHA\_1).
- (c) Highlight the benefits and burdens of using Digital Signature Standards (DSS). 3×5=15
4. (a) What is Kerberos used for ? Elaborate the main components of Kerberos. Explore the working of X.509 Authentication Service Certificate. 8
- (b) Differentiate between PGP and S/MIME. Why e-Mail compatibility function in PGP is needed ? 7

## Unit III

5. (a) What are the causes of cybercrime ? Explain the measures to prevent it.
- (b) Explore the mechanism for hardware protection and archival storage.
- (c) Why data security is important ? What 3-2-1 rule of backup includes ? 3×5=15
6. (a) Explain the relation between firewall and VPN. Which one to use and when ?

- (b) How does CPU protection prevent a process from monopolizing the CPU ?
- (c) What are trusted systems ? Discuss the following security threats : Worms, Bots Spyware.  $3 \times 5 = 15$

#### Unit IV

- 7. (a) Explain the different phases of digital forensic life-cycle. Highlight about hardware and software required for digital forensic. 8
  - (b) What are the different types and branches of digital forensic ? Explain the challenges in digital forensic. 7
8. (a) Why do we need cyber laws ? Discuss cybercrimes and punishment as per Indian IT Act.
- (b) Explain the provisions of digital signatures Indian IT Act against Cyber Crimes.
  - (c) Write the law perspective of cyber crimes and cyber security around the world.  $3 \times 5 = 15$