

B. Com. –VI

Course Code: CE 303(D)

Course Name: Computer Applications

Paper Title: Information Security

Objectives:

After completion of this course student will be able to know

- basics of Information Security & Cryptography
- various Security Technologies

Contents:

Unit – I Introduction to Information Security:

Introduction - what is Security? , Components of an Information System, Characteristics of Information, Balancing Information Security and Access, Security Professionals and the Organization.

Unit –II The Need for Security and Risk Management:

Business Needs, Threats, Attacks, Risk Management- Overview, Risk assessment, Risk Control Strategies

Unit – III Security Technologies: Firewalls and VPN:

Introduction, Access Control, Firewalls (Firewall Processing modes, Firewalls Categorized by generation, Firewall Categorized by Structure), Protecting Remote Connections – VPN

Unit – IV Cryptography:

Introduction, Foundations of Cryptography, Cipher Methods, Cryptographic Algorithms, Cryptographic Tools

Main Reference Book(s):

- (i) Principles of Information Security by Micheal E. Whitman & Herbert J Mattord, 4th Edition-Course Technology

Suggested Additional Reading Book(s):

- (i) The basics of Information Security by Jason Andress, Syngress Press
- (ii) Information Security Management Hand Book by Richard O’Hanley & James S. Tiller, 6th edition, CRC Press

Accomplishments of the student after completing the Course:

After Completion of this course Student would be able to

- Understand the basics of information Security
- Understand the use of Firewall
- Understand the basics of Cryptography

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Practicals

Do following Practical application using any one of the Antivirus like Quick Heal, K7 Antivirus etc.

- 1 How to Block & Unblock USB & DVD Drive?
- 2 How to Block Particular website?
- 3 How to Protect E-Mail?
- 4 How to Full Scan Windows and other Mobile?
- 5 How to Scan System(Full, Folders,File,Custom)?
- 6 How to Restrict Particular File To Scanning?
- 7 How to Make Password Protection for Scanning any External Drive?
- 8 Tools available in Antivirus Application.
- 9 Use of Internet & Network Protection
- 10 Reports available in Antivirus Application.
- 11 How to create Backup & Restore in Windows
- 12 How to update MS Windows
- 13 Understanding Windows Security Policies
- 14 Installing and using Microsoft Security Essentials / Windows Defender
- 15 Creation of Users and granting privileges in MS Windows
- 16 Password protecting a file with Winzip/Winrar/7zip utility
- 17 How to Secure the Browser (Firefox, Chrome and Internet Explorer)
- 18 How to protect MS Office documents
- 19 How to create a digital certificate in MS Windows
- 20 How to add digital signature to MS Office documents