**LESSON PLAN**

**NAME OF THE FACULTY: - SHASHI BHUSHAN**

**DISCIPLINE: - CSE**

**SEMESTER:- 6th**

**SUBJECT—Network Security**

**Lesson Plan Duration:- 15 weeks**

**Work Load (Lecture/Practical) per week (In hours): Lecture- 03, Practical -03**

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| **Week** | **Theory** | | **Practical** | |
|  | **Lecture Day** | **Topic (Including assignment/test)** | **Practical** | **Topic** |
| 1st | 1st | Unit-1-Introduction to subject, syllabus and books, Introduction to communication. | 1st | Installation and comparison of various anti virus software |
| 2nd | Need for securing a network; Principles of Security |
| 3rd | Type of attacks, introduction to  cyber crime, Recapitulation |
| 2nd | 4th | cyber law-Indian Perspective (IT Act 2000 and amended 2008) | 2nd | Installation and study of various parameters of firewall. |
| 5th | cyber  ethics, ethical hacking, Assignment |
| 6th | What is hacking? attacker, phreaker etc, Revision |
| 3rd | 7th | Unit-2-Securing Data over Internet Introduction to basic encryption and decryption | 3rd | Writing program in C to Encrypt/Decrypt using XOR key |
| 8th | concept of symmetric and asymmetric  key cryptography |
| 9th | overview of DES ,Assignment |
| 4th | 10th | RSA | Internal viva for the conducted 3 practical’s | |
| 11th | PGP |
| 12th | Introduction to Hashing: MD5, |
| 5th | 13th | SSL,  SSH | 4th | Study of VPN. |
| 14th | HTTPS |
| 15th | Digital Signatures |
| 6th | 16th | Digital certification, IPSec,Revision, | 5th | Study of various hacking tools. |
| 17th | Unit-3-Virus, Worms and Trojans |
| 18th | Definitions |
| 7th | 19th | preventive measures – access central | 6th | Practical applications of digital signature. |
| 20th | checksum verification, process  configuration, Revision |
| 21 | virus scanners, heuristic scanners, |
| 8th | 22 | application level virus scanners, | Internal viva for the conducted 6 practical’s | |
| 23 | deploying virus protection. |
| 24 | Revision |
| 9th | 25 | Unit-4-Firewalls |  |  |
| 26 | Definition and types of firewalls |
| 27 | firewall configuration |
| 10th | 28 | Limitations of firewall. Revision |  |  |
| 29 | Test and Revision |
| 30 | Unit-5-Intrusion Detection System (IDS) |
| 11th | 31 | IDS limitations – teardrop attacks |  | |
| 32 | counter measures; |
| 33 | Host based IDS set up, Revision |
| 12th | 34 | Unit-6-Handling Cyber Assets |  |  |
| 35 | Configuration policy as per standards |  |  |
| 36 | Disposable policy, Revision |  |  |
| 13th | 37 | Unit-7-Virtual Private Network (VPN) |  |  |
| 38 | Basics, setting of VPN |  |  |
| 39 | VPN diagram, configuration of required objects, exchanging  keys, |  |  |
| 14th | 40 | modifying security policy ,Revision |  |  |
| 41 | Unit-8-Disaster and Recovery  Disaster categories; network disasters |  |  |
| 42 | cabling, topology, single point of failure, save  configuration files |  |  |
| 15th | 43 | server disasters – UPS, RAID |  |  |
| 44 | Clustering, Backups, server recovery, Revision |  |  |
| 45 | Test |  |  |

**Teacher Name SHASHI BHUSHAN**