**LESSON PLAN**

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

**DISCIPLINE: - CSE**

**SEMESTER:-5TH**

**SUBJECT—COMPUTER NETWORKS**

**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 | **1** | 1. Networks Basics - Concept of network | **1st** | 1. Recognize the physical topology and cabling (coaxial, OFC, UTP, STP) of a network.2. Recognition and use of various types of connectors RJ-45, RJ-11,BNC and SCST |
| **2** | - Models of network computing |
| **3** | -Networking models-Peer-to –peer Network-Server Client Network- Network Services- Concept of switching | **2nd** |
| 2nd | **4** | - Switching Techniques | **3rd** | 3. Recognition of network devices (Switches, Hub, Routers of access points for Wi-Fi |
| **5** | **Revision/test** |
| **6** | OSI Model - OSI Reference Model- Function of various layers in OSI Reference Model | **4th** |
| 3rd | **7** | -do- | **5th** | 4. Making of cross cable and straight cable |
| **8** | **-do-** |
| **9** | Introduction to TCP/IP- Concept of physical and logical addressing- IPV4 addressers- Address space, Notations, Classful  | **6th** |
| 4th | **10** | Addressing, Classless | **7th** | .5. Install and configure a network interface card in a workstation |
| **11** | Addressing, Network Address Translation. |
| **12** | - Different classes of IP addressing, special IP address- Sub netting and super netting- Loop back concept | **8th** |
| 5th | **13** | - IPV4 and IPV6 packet Format | **9th** | 6. Identify the IP address of a workstation and the class of the address and configure the IPAddress on a workstation |
| **14** | 4. Network Architecture - Ethernet Specification and Standardization: |
| **15** | 10 Mbps (Traditional Ethernet), 10 Mbps (Fast Ethernet) and 1000 Mbps (GigabitEthernet) Introduction to Media Connectivity (Leased lines, ISDN,  | **10th** |
| 6th | **16** | PSTN, RF, | **11th** | **File checking** |
| **17** | DSL, VSAT |
| **18** | Optical and IPLC | **12th** |
| 7th | **19** | **Revision/test** | **13th** | 7. Managing user accounts in windows and LINUX |
| **20** |  **5.** Connectivity devices - Network connectivity Devices |
| **21** | - NICs- Hubs, bridges | **14th** |
| 8th | **22** | - Repeaters, switches | **15th** | 8. Study and Demonstration of sub netting of IP address |
| **23** | - Multiplexers |
| **24** | - Modems- Routers | **16th** |
| 9th | **25** | - Gateways | **17th** | 9. Use of Netstat and its options. |
| **26** | **Revision/test** |
| **27** | 6. Network Trouble Shooting Techniques - Trouble Shooting process  | **18th** |
| 10th | **28** | - Trouble Shooting Tools: PING | **19th** | **File checking** |
| **29** | IPCONFIG |
| **30** | IFCONFIGNETSTAT | **20th** |
| 11th | **31** | TRACEROOT | **21st** | 10. Connectivity troubleshooting using PING, IPCONFIG, IFCONFIG |
| **32** | Wiresharp/ Dsniffer/ Pcop |
| **33** | **Revision/test** | **22nd** |
| 12th | **34** | IEEE 802.11- Architecture | **23rd** | 11. Installation of Network Operating System(NOS) |
| **35** | IEEE 802.11- Architecture |
| **36** | IEEE 802.11- Architecture | **24** |
| 13th | **37** | IEEE 802.11- Architecture | **25** | **File checking** |
| **38** | Bluetooth- Architecture |
| **39** | **Revision/test** | **26** |
| 14th | **40** | Bluetooth- Applications | **27** | 12. Visit to nearby industry for latest networking techniques |
| **41** | Comparison between bluetooth and Wifi |
| **42** | WiMax and Li-Fi | **28** |
| 15th | **43** | **Revision/test** | **29** | **File checking and internal viva-voice** |
| **44** | **Revision/test** |
| **45** | **Revision/test** | **30** |