**Lesson Plan**

**Name of faculty :** Ajeta Nandal

**Discipline :** Computer Engineering

**Semester :** 5

**Subject :** Computer Networks

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| Sr.  No. | Week/Duration | Contents | Remarks |
| 1 | Week1 (16-20)  July 2018 | L1 : Introduction of the subject. (Unit 1: 06 hrs) |  |
| L2: Concept of Computer networks, Models of network  computing, goals and applications of computer networks |  |
| L3 :networking models, peer to peer & Client-Server ,  comparison of both |  |
| L4 : Networking services |  |
| 2 | Week 2(23-27)  July 2018 | L5: Concept of switching & switching techniques |  |
| L6: comparison of circuit switching, massage switching & packet  switching |  |
| L1: OSI model, introduction Unit 2(12 hrs) |  |
| L2: Network architecture, services and service primitives |  |
| 3 | Week 3(30 July-  3 Aug) 2018 | L3: concept of layered architecture, types of communication in  layers i.e. peer to peer & hierarchical |  |
| L4: concept of data units in layered architecture, interface &  protocols, Design issues of different layers |  |
| L5: function of Physical Layer |  |
| L6: functions of DLL, framing, error & flow control methods |  |
| 4 | Week 4(6-10)  Aug 2018 | L7: sliding window algorithms, Functions of Network Layer,  Routing and congestion control algorithms |  |
| L8: network layer continues, functions of Transport layer |  |
| L9: Transport layer continues, elements of T. Layer, Berkley  sockets, T. layer protocols |  |
| L10: functions of Session Layer and Presentation layer |  |
| 5 | Week 5 (13-17)  Aug 2018 | L11: Compression Techniques and Encryption/Decryption |  |
| L12: Functions of Application Layer |  |
| L13 : some numerical exercises in OSI model |  |
| L1: Introduction to TCP/IP , introduction Unit 3(12 hrs) |  |
| 6 | Week 6(20-24)  Aug 2018 | L2: concept of addressing, physical & logical addressing |  |
| L3: IPv4 addressing, classes of IP address, address space of IP  address and classes |  |
| L4: IP address class notations, concept of classful and classless  addressing |  |
| L5: special IP addresses, loopback concept |  |
| 7 | Week 7(27-31)  Aug 2018 | L6:Network Address Translation(NAT) |  |
| L7:concept of Subnetting and Supernetting |  |
| L8: Example of subnetting exercises |  |

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|  |  | L9:Example of supernetting exercises |  |
| 8 | Week 8( 3-7)  Sept 2018 | L10:more exercises on subnetting & supernetting |  |
| L11:IPv4 vs IPv6, comparison in features and packet formats |  |
| L12: more about IPv4 & IPv6 |  |
| L1: : Network Architecture , Introduction :Ethernet **Unit 4**  (12 hrs) |  |
| 9 | Week 9(10-14)  Sept 2018 | L2: Ethernet specifications & standardization : 10  Mbps(Traditional Ethernet) |  |
| First Sessional test week |  |
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| 10 | Week 10(17-  21) Sept 2018 | L3: 100 Mbps Fast Ethernet & Gigabit Ethernet |  |
| L4: Comparison between 10, 100,& 1000 Mbps(Giga) |  |
| L5: Introduction to media connectivity, Leased Lines  characteristics, advantages 7 disadvantages |  |
| L6: ISDN features, architecture & advantages |  |
| 11 | Week 11 (24-  28) Sept 2018 | L7:PSTN architecture, features |  |
| L8: RF concept, features |  |
| L9: DSL concept, features & advantages, comparison |  |
| L910: VSAT architecture & advantages |  |
| 12 | Week 12 (1-5)  Oct 2018 | L11: optical media characteristics |  |
| L12: IPLC characteristics |  |
| One holiday slot during this week\* |  |
| L1: Connectivity Devices Introduction, NIC **Unit 5** (08Hrs) |  |
| 13 | Week 13( 8-12)  Oct 2018 | L2: N/W connecting Devices Hubs & Repeaters |  |
| Second Sessional week |  |
| Second Sessional week |  |
| Second Sessional week |  |
| 14 | Week 14 (15-  19) Oct 2018 | L3: Bridges & Switches |  |
| L4: Multiplexers, Modem |  |
| L5: Routers & Gateways |  |
| L6: Revision of networking devices |  |
| 15 | Week 15 (22-  26) Oct 2018 | L1: Network Troubleshooting Techniques Unit 6 (08 hrs) |  |
| L2: Troubleshooting Process |  |
| L3: troubleshooting Tools: PING |  |
| L4: troubleshooting tools: ipconfig & ifconfig |  |
| 16 | Week 16 (29 Oct-2 Nov) 2018 | L5: Tools Natstat & Traceroot/Tracert |  |
| L6: Wireshark/sniffers/Pcop |  |
| L7: wireshark/sniffers continues |  |
| L8: Revision Troubleshooting process |  |
| 17 | Week 17(5-9)  Nov 2018 | L1: wireless connectivity introduction Unit 7 (06 Hrs) |  |
| L2: IEEE802.11, standards & their features |  |
| L3: IEEE 802.11 architecture |  |
| L4: IEEE 802.11 architecture continues |  |
| 18 | Week 18(12-  16) Nov 2018 | L5: Bluetooth Concept and its characterstics |  |
| L6: Bluetooth architecture |  |
| Third Sessional test |  |
| Third sessional test |  |