**NAME OF THE FACULTY** : HIMANSHU YADAV

**DISCIPLINE** : ECE

**SEMESTER** : 5th

**SUBJECT** : COMPUTER NETWORKS

**LESSON PLAN DURATION** : 15 weeks (from Oct-2021 to Jan-2022)

WORK LOAD (LECTURE/PRACTICAL) PER WEEK (IN HOURS):- LECTURE-**04**, PRACTIACL-- PER GROUP

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| **WEEK** | **THEORY** |
| **Lecture****/ Hrs** |  **TOPIC** **(Including Assignment/Test/Quiz)** |
| 1st | 1 | What is network |
|
| 2 | Peer-to –peer Network |
|
| 3 | Server Client Network |
| 4 | LAN, MAN and WAN |
|
| 2nd | 5 | Network Services |
|
| 6 | Topologies |
|
| 7 | Topologies |
| 8 | Topologies |
|
| 3rd | 9 | Switching Techniques |
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| 10 | Switching Techniques |
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| 11 |  OSI Model Standards |
| 12 | OSI Reference Model |
|
| 4th | 13 |  OSI Physical layer concepts |
|
| 14 | OSI Data-link layer concepts |
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| 15 | OSI Networks layer concepts |
| 16 | OSI Networks layer concepts |
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| 5th | 17 | OSI Transport layer concepts |
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| 18 | OSI Session layer concepts |
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| 19 | OSI presentation layer concepts |
| 20 | OSI Application layer concepts |
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| 6th | 21 |  **Assignment-1** |
|
| 22 |  **Sessional Test-1** |
|
| 23 |  Introduction to TCP/IP Concept of physical and logical addressing |
| 24 | Different classes of IP addressing, special IP address |
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| 7th | 25 | Different classes of IP addressing, special IP address |
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| 26 | Sub netting and super netting |
|
| 27 | Loop back concept |
| 28 | IPV4 and IPV6 packet Format |
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| 8th | 29 | IPV4 and IPV6 packet Format |
|
| 30 | Configuring IPV4 and IPV6 |
|
| 31 | Configuring IPV4 and IPV6 |
| 32 |  Cables and Connectors Types of Cables( Coaxial, Twisted Pair), Shielded and Unshielded Pair of Cables (Straight wire Cable, Cross Over Cables) with colour coding. |
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| 9th | 33 | Types of Cables( Coaxial, Twisted Pair), Shielded and Unshielded Pair of Cables (Straight wire Cable, CrossOver Cables) with colour coding. |
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| 34 | Types of Cables( Coaxial, Twisted Pair), Shielded and Unshielded Pair of Cables (Straight wire Cable, CrossOver Cables) with colour coding. |
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| 35 | Types of Cables( Coaxial, Twisted Pair), Shielded and Unshielded Pair of Cables (Straight wire Cable, CrossOver Cables) with colour coding. |
| 36 | Ethernet Specification and Standardization:10 Mbps (Traditional Ethernet), 100 Mbps (Fast Ethernet) and 1000 Mbps (Gigabit Ethernet),Leased lines. |
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| 10th | 37 | Ethernet Specification and Standardization:10 Mbps (Traditional Ethernet), 100 Mbps (Fast Ethernet) and 1000 Mbps (Gigabit Ethernet),Leased lines. |
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| 38 | Use of RJ45, RJ11, BNC,SCST. |
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| 39 | Use of RJ45, RJ11, BNC,SCST. |
| 40 |  |
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| 11th | 41 | Use of RJ45, RJ11, BNC,SCST. |
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| 42 |  Revision |
| 43 |  **Assignment-2** |
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| 44 |  **Sessional Test-2** |
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| 12th | 45 |  Network connectivity Devices |
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| 46 | NICs |
| 47 | Hubs |
|
| 48 | Repeaters |
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| 13th | 49 | Switches |
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| 50 | Routers and Routing Protocols. |
| 51 | Configuring of Routers.VOIP and Net-to-Phone Telephony |
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| 52 |  Network Administration / Security Client/Server Technology |
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| 14th | 53 |   Network Administration / Security Client/Server Technology |
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| 54 |  Server Management RAID management and mirroring |
| 55 |  Cryptography |
|
| 56 | Ethical Hacking |
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| 15th | 57 |  Basics of Wireless: Wireless MAN, Networking, Wireless LAN,  |
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| 58 |  Wi-Fi, WiMax (Broad- band Wireless) and Li-Fi. |
| 59 |  **Assignment- 3** |
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| 60 |  **Sessional Test- 3** |
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