

PANIPAT INSTITUTE OF ENGINEERING & TECHNOLOGY

Department of Electronics & Communication Engineering

LESSON PLAN

Subject Name: - Computer Networks
Year: - 3rd

Subject Code: - ECO-1A
Semester:-5th

| Lecture No. | | Topics To Be Covered | References |
|--------------------|----------------|-------------------------------------------------|-----------------------------------------------------------------------------|
| L 1 | UNIT 1: | Introduction to computer networks | Forouzan B.A, Data Communications and Networking, Tata-Mc-Graw Hill. |
| L 2 | | Protocols and standards | Tanenbaum A.S, Computer Networks, PHI. |
| L 3 | | OSI MODEL | Stallings W, Data and Communications, PHI. |
| L 4 | | TCP/IP protocol suite, ADDRESSING | Leon-Garcia, Computer Network, Mc Graw Hill |
| L 5 | | Physical layer: Analog & digital signals & data | Forouzan B.A, Data Communications and Networking, |

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| | | | Tata-Mc-Graw Hill. |
| L 6 | | Transmission media : guided media | Tanenbaum A.S, Computer Networks, PHI. |
| L 7 | | Unguided media | Stallings W, Data and Communications, PHI. |
| L 8 | | The telephone system | Leon-Garcia, Computer Network, Mc Graw Hill |
| L 9 | | Narrowband ISDN | Forouzan B.A, Data Communications and Networking, Tata-Mc-Graw Hill. |
| L 10 | | Broadband ISDN and ATM | Tanenbaum A.S, Computer Networks, PHI. |
| L 11 | UNIT 2: | Data link layer design issues, error detection | Stallings W, Data and Communications, PHI. |
| L 12 | | Error correction, framing | Leon-Garcia, Computer Network, Mc Graw Hill |

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| L 13 | | Flow and error control | Forouzan B.A, Data Communications and Networking, Tata-Mc-Graw Hill. |
| L 14 | | Noisy and noiseless channels | Tanenbaum A.S, Computer Networks, PHI. |
| L 15 | | HDLC, Point to point protocols | Stallings W, Data and Communications, PHI. |
| L16 | | Aloha protocols | Leon-Garcia, Computer Network, Mc Graw Hill |
| L 17 | | LAN Protocols | Forouzan B.A, Data Communications and Networking, Tata-Mc-Graw Hill. |
| L 18 | | Wired LANs, Wireless LAN | Tanenbaum A.S, Computer Networks, PHI. |
| L 19 | | Networks, satellite networks | Stallings W, Data and Communications, PHI. |

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| L 20 | UNIT 3: | Design issues | Leon-Garcia, Computer Network, Mc Graw Hill |
| L 21 | | IPv4 addresses, IPv6 | Forouzan B.A, Data Communications and Networking, Tata-Mc-Graw Hill. |
| L 22 | | Internetworking | Tanenbaum A.S, Computer Networks, PHI. |
| L 23 | | congestion control algorithms | Stallings W, Data and Communications, PHI. |
| L 24 | | Transport & Session layer: design issues, UDP | Leon-Garcia, Computer Network, Mc Graw Hill |
| L 25 | | TCP Connection Management | Forouzan B.A, Data Communications and Networking, Tata-Mc-Graw Hill. |
| L 26 | | Remote procedure calls | Tanenbaum A.S, Computer Networks, PHI. |

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| L 27 | UNIT 4: | Presentation layer: design issues | Stallings W, Data and Communications, PHI. |
| L 28 | | Abstract syntax notation | Leon-Garcia, Computer Network, Mc Graw Hill |
| L 29 | | Data compression technique | Forouzan B.A, Data Communications and Networking, Tata-Mc-Graw Hill. |
| L 30 | | Cryptography | Tanenbaum A.S, Computer Networks, PHI. |
| L 31 | | Application layer: Design issues | Stallings W, Data and Communications, PHI. |
| L 32 | | Access and management | Leon-Garcia, Computer Network, Mc Graw Hill |
| L 33 | | Electronic mail | Forouzan B.A, Data Communications and Networking, Tata-Mc-Graw Hill. |

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| L 34 | | Virtual terminals | Tanenbaum A.S, Computer Networks, PHI. |
| L 35 | | WWW & HTTP | Stallings W, Data and Communications, PHI. |
| L 36 | | Revision | Leon-Garcia, Computer Network, Mc Graw Hill |
| L 37 | | Revision | Forouzan B.A, Data Communications and Networking, Tata-Mc-Graw Hill. |
| L 38 | | Revision | Tanenbaum A.S, Computer Networks, PHI. |

Text Books

1. **Forouzan B.A, Data Communications and Networking, Tata-Mc-Graw Hill.**
2. **Tanenbaum A.S, Computer Networks, PHI.**

Reference Books:

1. Stallings W, Data and Communications, PHI.
2. Leon-Garcia, Computer Network, Mc Graw Hill