

# कार्यालय प्राचार्य, छत्तीसगढ़ इंस्टीट्यूट ऑफ टेक्नॉलजी, जशपुर (छ.ग.)

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## LESSON PLAN SESSION JAN – JUN 2026

SUBJECT: **COMPUTER NETWORK**

SEMESTER: **4<sup>TH</sup>**

BRANCH: - **COMPUTER SCIENCE & ENGINEERING**

UNIT NUMBER	NAME OF THE TOPIC	NO OF CLASS REQUIRED	REMARK
<b>Unit 01.</b>  <b>Basics of Computer Networking</b>	1.1 Definition & history of networks,	01	
	1.2 Application of Computer Networks,		
	1.3 Standard Organizations and Protocols,	01	
	1.4 Line Configuration, 1.4.1 Point to Point connection, 1.4.2 Multipoint connection,	01	
	1.5 Network Topology, 1.5.1 Bus Topology, 1.5.2 Ring Topology,	01	
	1.5.3 Star Topology, 1.5.4 Mesh Topology,	01	
	1.5.5 Hybrid Topology, Tree Topology	01	
	1.6 Categories of network, 1.6.1 Based on Physical scope	01	
	a) LAN, b) MAN, c) WAN,	01	
	1.6.2 Based on Connection, a) Connection Oriented, b) Connection Less,	01	
<b>Unit 02.</b>  <b>Reference Model for network communication</b>	2.1 OSI model and its main function, feature of each layer	01	
	2.1.1 Physical Layer, 2.1.2 Data Link Layer,	01	
	2.1.3 Network Layer, 2.1.4 Transport Layer,	01	
	2.1.5 Session Layer, 2.1.6 Presentation Layer, 2.1.7 Application Layer,	01	
	2.2 TCP/IP model and its main function, feature and protocol of each layer	01	
	2.2.1 Physical Layer, 2.2.2 Network Layer,	01	
	2.2.3 Transport Layer, 2.2.4 Application Layer,	01	
	2.3 Compare OSI and TCP/IP model	01	
<b>UNIT 03.</b>  <b>Transmission Media and Mode</b>	3.1 Basic Concept, 3.1.1 Communication Channels Characteristics,	01	
	3.1.2 Band Width, 3.1.3 Attenuation, 3.1.4 Bit rate and Baud rate,	01	
	3.2 Types of Transmission Media 3.2.1 Guided Media: a) Twisted Pair,	01	
	b) Coaxial Cable, c) Optical Fiber,	01	
	3.2.2 Un Guided Media : a) Electromagnetic spectrum,	01	
	b) Radio Transmission, c) Microwave Transmission,	01	
	e) Satellite Communication,	01	
3.3 Mode of Communication, 3.3.1 Simplex, 3.3.2 Half duplex, 3.3.3 Full Duplex,	01		
<b>Unit 04.</b>  <b>Networking devices</b>	4.1 Network communication devices, 4.1.1 Repeater, 4.1.2 Hub,	01	
	4.1.3 Switch, 4.1.4 Bridge,	01	
	4.1.5 Router, 4.1.6 Access Point,	01	
	4.1.7 Gateway,	01	
	4.1.8 RS 232, 4.1.9 RJ 45 & RJ11,	01	
	4.1.10 NIC, 4.1.11 Bluetooth,	01	
	4.1.12 Wi-fi IEEE 802.11 (b,g,n)	01	
<b>UNIT: 05.</b>  <b>Network Protocol and Applications</b>	5.1 IP Protocol – IP v4, IP v6.	01	
	5.2 Addressing Schemes, 5.3 Subnet & masking,	01	
	5.4 DNS, 5.5 Email,	01	
	5.6 FTP, 5.7 HTTP,	01	
	5.8 TCP & UDP,	01	
	5.9 NETBIOS Protocol,	01	
	5.10 ARP & RARP	01	
	5.11 ICMP, 5.12 SMTP	01	
<b>Total Class Required</b>		<b>40</b>	

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