

Department of Computer Science & Engineering

Lesson Plan cum Diary 2015-16

Name	of the Subject : A	Advanced Co	omputer Ne	tworks (14	MT10501)		
Name	e of the faculty Member : N	1r.N.Papanr	ia	0.10)			
Class	& Semester : N	No of	nester (CN	No of			
S. No.	Торіс	periods	Date(s) covered	periods	Book(s) followed	Topics for self study	
		<u>Iequireu</u> Unit	ŀ-T	useu			
1	Review of Computer				Т2		
	Networks and the Internet:						
	The Network edge. The	3					
	Network core . Access					Networking	
	Networks and Physical media					and Internet	
2.	ISPs and Internet Backbones,	2			T2	Access	
	Delay and Loss in Packet,	2				Devices	
3.	Packet-Switched Networks.	-			T2	Switching	
		T				and Routing	
4.	Foundation of Networking	1			T1	Devices	
	Protocols:					Devices	
	5-layer TCP/IP Model						
5.	7-Layer OSI Model	1			T1		
6.	Internet Protocols and	1			T1		
	Addressing					-	
7.	Equal-Sized Packets Model:	2			T1		
	ATM.	_					
1	otal no of periods required:	11	Total	no of peri	ods used:		
0	The Link Lover and Local Area		-11		тэ		
0.	Networker Link Lover	1			12		
	Introduction and Convisor						
0	Emer Detection and Emer	1			тэ	-	
9.	Correction techniques	T			12		
10	Multiple Access Protocols Link	1			тэ	Classification	
10	Laver Addressing	Ŧ			12	of MAC	
11	Ethernet Interconnections:	1			Т2	protocols	
	Hubs and Switches	Ť			12	Contention-	
12	PPL: The point-to-point	1			Т2	Access MAC	
	Protocol. Link Virtualization	_			12		
13	Routing and Internet	2			T1		
_	Working : Network Laver						
	Routing, Least-Cost-Path						
	algorithms						
14	Non-Least-Cost-Path algorithms	2			T1]	
15	Intra domain Routing Protocols	1			T1		
16	Inter domain Routing Protocols	1			T1		
٦	otal no of periods required:	11	Total	no of peri	ods used:		
Unit-III							
17	Internet Protocol:	1			T2	Security	
	Internetworking	÷				Methods,	

18	IPv4	1		T2	Secret-Key
19	IPv6, Transition from IPv4 to	1		T2	Encryption
	IPv6				protocols,
20	Transport and End-to-End	1		T1	Public-Key
	Protocols: Transport Layer				Encryption
21	Transmission Control Protocol	2		T1	protocols
22	User Datagram Protocol (UDP)	2		T1	
23	TCP Congestion Control.	2		T1	
	Total no of periods required:	10	Total no o	f periods used:	
		UNIT	- IV	•	_
24	Wireless Networks and	1		T1	
	Mobile IP : Infrastructure of				
	Wireless Networks				Intra Domain
25	Wireless LAN Technologies	2		T1	Multicast
26	IEEE 802.11 Wireless Standards	2		T1	protocols-
27	Wireless Mesh Networks	2		T1	DVMRP,
	(WMNs).				IGMP, PIM
28	Optical Networks and WDM	1		T1	Inter Domain
	Systems: Overview of Optical				multicast
	Networks				protocols-
29	Basic Optical Networking	1		T1	MBGP,
	Devices				MSDP
30	Large-Scale Optical Switches	1		T1	-
31	Optical Routers	1		T1	
51	optical Routers	-		' -	
	Total no of periods required:	- 11	Total n	o of periods used:	
1	Total no of periods required:	- 11 UNIT	Total no	o of periods used:	
31 1 32	Total no of periods required:	11 UNI 1	Total no	o of periods used:	
31 1 32	Fotal no of periods required: VPNs, Tunneling and Overlay Networks:	11 UNIT 1	Total ne r- V	o of periods used:	
31 1 32	Optical Noticity Fotal no of periods required: VPNs, Tunneling and Overlay Networks: Virtual Private Networks (VPNs)	11 UNI 1	Total no r- V	o of periods used:	VoIP,
31 32 33	Otal no of periods required: VPNs, Tunneling and Overlay Networks: Virtual Private Networks (VPNs) Multiprotocol Label Switching	11 UNI 1	Total no	o of periods used: T1 T1	VoIP, Multimedia
31 32 33	VPNs, Tunneling and Overlay Networks: Virtual Private Networks (VPNs) Multiprotocol Label Switching (MPLS)	11 UNI 1	Total no	o of periods used: T1 T1	VoIP, Multimedia Networking,
31 32 33 34	Optical Noticity VPNs, Tunneling and Overlay Networks: Virtual Private Networks (VPNs) Multiprotocol Label Switching (MPLS) Overlay Networks.	11 UNIT 1 1 1	Total no	o of periods used: T1 T1 T1 T1	VoIP, Multimedia Networking, Real Time
31 32 33 33 34 35	VPNs, Tunneling and OverlayNetworks: Virtual PrivateNetworks (VPNs)Multiprotocol Label Switching(MPLS)Overlay Networks.Mobile Ad-Hoc Networks:	11 UNI 1 1 1 1 1	Total no	o of periods used: T1 T1 T1 T1 T1 T1 T1	VoIP, Multimedia Networking, Real Time media
32 33 33 34 35	Optical no of periods required: VPNs, Tunneling and Overlay Networks: Virtual Private Networks (VPNs) Multiprotocol Label Switching (MPLS) Overlay Networks. Mobile Ad-Hoc Networks: Overview of Wireless Ad –Hoc	11 UNI 1 1 1 1 1	Total no	o of periods used: T1 T1 T1 T1 T1 T1	VoIP, Multimedia Networking, Real Time media Transport
32 32 33 34 35	Optical NoticesTotal no of periods required:VPNs, Tunneling and OverlayNetworks: Virtual PrivateNetworks: Virtual PrivateNetworks: (VPNs)Multiprotocol Label Switching(MPLS)Overlay Networks.Mobile Ad-Hoc Networks:Overview of Wireless Ad –HocNetworks	11 UNI 1 1 1 1 1	Total no	T1 T1 T1 T1 T1 T1 T1	VoIP, Multimedia Networking, Real Time media Transport protocols,
31 32 33 34 35 36	Optical RotationTotal no of periods required:VPNs, Tunneling and OverlayNetworks: Virtual PrivateNetworks: Virtual PrivateNetworks: (VPNs)Multiprotocol Label Switching(MPLS)Overlay Networks.Mobile Ad-Hoc Networks:Overview of Wireless Ad –HocNetworksRouting in Ad -Hoc Networks	1 1 1 1 1 1 1 1 1 1	Total no	T1 o of periods used: T1	VoIP, Multimedia Networking, Real Time media Transport protocols, Distributed
31 32 33 33 34 35 36 37	VPNs, Tunneling and Overlay Networks: Virtual Private Networks (VPNs)Multiprotocol Label Switching (MPLS)Overlay Networks.Mobile Ad-Hoc Networks: Overview of Wireless Ad –Hoc NetworksRouting in Ad -Hoc Networks Routing Protocols for Ad-Hoc	1 1 1 1 1 1 1 1 1 1 1 2	Total no	T1 o of periods used: T1	VoIP, Multimedia Networking, Real Time media Transport protocols, Distributed Media
31 32 33 33 34 35 36 37	VPNs, Tunneling and Overlay Networks: Virtual Private Networks (VPNs)Multiprotocol Label Switching (MPLS)Overlay Networks.Mobile Ad-Hoc Networks: Overview of Wireless Ad –Hoc NetworksRouting in Ad -Hoc NetworksRouting Protocols for Ad-Hoc Networks- DSDV ,	1 1 1 1 1 1 1 1 1 1 2	Total no	T1 o of periods used: T1	VoIP, Multimedia Networking, Real Time media Transport protocols, Distributed Media networking
31 32 33 33 34 35 36 37	Optical RotationsTotal no of periods required:VPNs, Tunneling and OverlayNetworks: Virtual PrivateNetworks: Virtual PrivateNetworks: Virtual PrivateNetworks: (VPNs)Multiprotocol Label Switching(MPLS)Overlay Networks.Mobile Ad-Hoc Networks:Overview of Wireless Ad –HocNetworksRouting in Ad -Hoc NetworksRouting Protocols for Ad-HocNetworks- DSDV ,DSR,AODV	1 1 1 1 1 1 1 1 1 1 2	Total no	T1 o of periods used: T1	VoIP, Multimedia Networking, Real Time media Transport protocols, Distributed Media networking
31 32 33 33 34 35 36 37 38	Optical RotationsTotal no of periods required:VPNs, Tunneling and OverlayNetworks: Virtual PrivateNetworks: Virtual PrivateNetworks (VPNs)Multiprotocol Label Switching(MPLS)Overlay Networks.Mobile Ad-Hoc Networks:Overview of Wireless Ad –HocNetworksRouting in Ad -Hoc NetworksRouting Protocols for Ad-HocNetworks- DSDV ,DSR,AODVWireless Sensor Networks:	1 UNIT 1 1 1 1 1 2 1	Total no	T1 o of periods used: T1	VoIP, Multimedia Networking, Real Time media Transport protocols, Distributed Media networking
31 32 33 33 34 35 36 37 38	VPNs, Tunneling and Overlay Networks: Virtual Private Networks (VPNs)Multiprotocol Label Switching (MPLS)Overlay Networks.Mobile Ad-Hoc Networks: Overview of Wireless Ad –Hoc NetworksRouting in Ad -Hoc NetworksRouting Protocols for Ad-Hoc Networks-DSDV , DSR,AODVWireless Sensor Networks: Sensor Networks and Protocol	1 1 1 1 1 1 1 1 1 1 1 1 1 1	Total no	T1 o of periods used: T1	VoIP, Multimedia Networking, Real Time media Transport protocols, Distributed Media networking
31 32 33 33 34 35 36 37 38	Optical no of periods required: VPNs, Tunneling and Overlay Networks: Virtual Private Networks: Virtual Private Networks: Virtual Private Multiprotocol Label Switching (MPLS) Overlay Networks. Mobile Ad-Hoc Networks: Overview of Wireless Ad –Hoc Networks Routing in Ad -Hoc Networks Routing Protocols for Ad-Hoc Networks- DSDV , DSR,AODV Wireless Sensor Networks : Sensor Networks and Protocol Structures	1 1 1 1 1 1 1 1 1 1 1 1 1 1	Total no	T1 o of periods used: T1	VoIP, Multimedia Networking, Real Time media Transport protocols, Distributed Media networking
31 32 33 33 34 35 36 37 38 38 39	Optical RotationsTotal no of periods required:VPNs, Tunneling and Overlay Networks: Virtual Private Networks: Virtual Private Networks (VPNs)Multiprotocol Label Switching (MPLS)Multiprotocol Label Switching (MPLS)Overlay Networks.Mobile Ad-Hoc Networks: Overview of Wireless Ad –Hoc NetworksNoting in Ad -Hoc NetworksRouting in Ad -Hoc NetworksRouting Protocols for Ad-Hoc Networks- DSDV , DSR,AODVSensor Networks: Sensor Networks and Protocol Structures Communication Energy Model	1 1 1 1 1 1 1 1 1 1 1 1 1 1	Total no	T1 o of periods used: T1	VoIP, Multimedia Networking, Real Time media Transport protocols, Distributed Media networking
31 32 33 33 34 35 36 37 38 38 39 40	Optical RotationsTotal no of periods required:VPNs, Tunneling and OverlayNetworks: Virtual PrivateNetworks: Virtual PrivateNetworks: (VPNs)Multiprotocol Label Switching(MPLS)Overlay Networks.Mobile Ad-Hoc Networks:Overview of Wireless Ad –HocNetworksRouting in Ad -Hoc NetworksRouting Protocols for Ad-HocNetworks- DSDV ,DSR,AODVWireless Sensor Networks:Sensor Networks and ProtocolStructuresCommunication Energy ModelClustering Protocols	1 UNIT 1 1 1 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1	Total no	T1 o of periods used: T1	VoIP, Multimedia Networking, Real Time media Transport protocols, Distributed Media networking
31 32 33 33 34 35 36 37 38 38 39 40 41	Optical no of periods required: VPNs, Tunneling and Overlay Networks: Virtual Private Networks: Virtual Private Networks (VPNs)Multiprotocol Label Switching (MPLS)Overlay Networks.Mobile Ad-Hoc Networks: Overview of Wireless Ad –Hoc NetworksRouting in Ad -Hoc NetworksRouting Protocols for Ad-Hoc Networks-DSDV , DSR,AODVWireless Sensor Networks: Sensor Networks and Protocol StructuresCommunication Energy Model Clustering ProtocolsRouting ProtocolsRouting Protocols	1 UNIT 1 1 1 1 1 1 2 1 1 2 1 1 2	Total no	T1 o of periods used: T1	VoIP, Multimedia Networking, Real Time media Transport protocols, Distributed Media networking
31 32 33 33 34 35 36 37 38 38 39 40 41 1	Optical RotationsTotal no of periods required:VPNs, Tunneling and Overlay Networks: Virtual Private Networks: Virtual Private Networks (VPNs)Multiprotocol Label Switching (MPLS)Overlay Networks.Mobile Ad-Hoc Networks: Overview of Wireless Ad –Hoc NetworksRouting in Ad -Hoc Networks Routing Protocols for Ad-Hoc Networks-DSDV , DSR,AODVWireless Sensor Networks: Sensor Networks and Protocol StructuresCommunication Energy Model Clustering Protocols Routing ProtocolsCommunication Energy Model	1 1 1 1 1 1 1 1 1 1 1 1 1 1	Total no	o of periods used: T1 T1	VoIP, Multimedia Networking, Real Time media Transport protocols, Distributed Media networking

TEXT BOOKS:

1: Nader F. Mir, "Computer and Communication Networks," Pearson Education, 2007

2: F. Kurose, Keith W.Ross, "Computer Networking: A Top-Down Approach Featuring the Internet,", Pearson Education, Third Edition, 2007

REFERENCE BOOKS:

1: Behrouz, A. Forouzan, "Data Communications and Networking," Tata McGraw Hill,

Fourth Edition, 2007.

- 2: AndrewS. Tanenbaum,, "Computer Networks," Fourth Edition, Prentice Hall.3: S.Keshav,, "An Engineering Approach to Computer Networking," ,Pearson Education.

Signature of the Faculty Member

Signature of the HOD