VIVEKANANDHA COLLEGE OF ENGINEERING FOR WOMEN
(AUTONOMOUS)
DEPARTMENT OF INFORMATION TECHNOLOGY

ACADEMIC YEAR: 2017-2018 **YEAR : III**

BRANCH: IT **SEM : 05**

NAME OF THE SUBJECT & SUBJECT CODE: COMPUTER NETWORKS & U15IT513

NAME OF THE SUBJECT INCHARGE: Dr. N M SARAVANAA KUMAR, HOD/IT

LESSON PLAN
UNIT I
Introduction

Data Communications - Data Flow - Networks – The Internet - Protocols and Standards - Network Models: Layered Tasks - The OSI Model - TCP/IP Protocol Suite - Addressing - Transmission Media – Connecting LANs, Backbone Networks, and Virtual LANs: Connecting Devices.

Session No	Topics to be covered	Time In mints	Text/Ref	Teaching Method
1	Data Communications - Data Flow	45	A	BB
2	Networks – The Internet	45	A	BB
3	Protocols and Standards	45	A	BB
4	Network Models: Layered Tasks	45	A	BB
5	The OSI Model • Physical Layer • Datalink Layer • Network Layer • Transport Layer	45	A	BB/PPT
6	The OSI Model • Session Layer • Presentation Layer • Application Layer	45	A	BB/PPT
7	TCP/IP Protocol Suite • Network Interface Layer • Internet Layer • Host to Host Transport Layer • Application Layer	45	A	BB/PPT
8	Addressing	45	A	BB
9	Transmission Media – Connecting LANs	45	A	BB

10	Backbone Networks	45	A	BB
11	Virtual LANs: Connecting Devices	45	A	BB
12	Revision	45	-	BB

UNIT II

Data link Layer

Introduction - Block Coding - Cyclic codes - Checksum – Data Link Control: Framing – Flow and Error Control – Noiseless Channels – Noisy Channels –HDLC -Multiple Access: Random Access – Channelization -Wired LANs: IEEE Standards- Standard Ethernet.

Session No	Topics to be covered	Time	Text/Ref	Teaching Method
1	Introduction	45	A	BB
2	Block Coding	45	A	BB
3	Cyclic codes	45	A	BB
4	Checksum	45	A	BB
5	Data Link Control: Framing	45	A	BB
6	Flow and Error Control	45	A	BB
7	Noiseless Channels – Noisy Channels	45	A	BB
8	HDLC	45	A	BB/PPT
9	Multiple Access: Random Access	45	A	BB
10	Channelization	45	A	BB
11	Wired LANs: IEEE Standards- Standard Ethernet.	45	A	BB
12	Revision	45	-	BB

UNIT III

Network Layer

IPv4 Addresses- IPv6 Addresses - Internetworking - IPv4 - IPv6 – Transition from IPv4 to IPv6 -Network Layer: Delivery, Forwarding, and Routing: Address Mapping – Internet Control Message Protocol (ICMP) – Internet Group Management Protocol (IGMP) – Network Layer: Delivery, Forwarding, and Routing.

Session No	Topics to be covered	Time	Text/Ref	Teaching Method
1	IPv4 Addresses	45	A	BB
2	IPv6 Addresses	45	A	BB
3	Internetworking - IPv4 - IPv6	45	A	PPT
4	Transition from IPv4 to IPv6	45	A	BB
5	Network Layer: Introduction	45	A	BB
6	Address Mapping	45	A	BB
7	Internet Control Message Protocol (ICMP)	45	A	BB
8	Internet Group Management Protocol (IGMP)	45	A	BB
9	Network Layer: Delivery	45	A	BB
10	Network Layer: Forwarding, and Routing	45	A	PPT
11	Revision	45	-	BB

UNIT IV

Transport Layer

Process-to-Process Delivery - User Datagram Protocol (UDP) - Transmission Control Protocol (TCP) – Stream Control Transmission Protocol (SCTP) – Congestion Control and Quality of Service: Data Traffic - Congestion Control - Quality of Services (QoS).

Session No	Topics to be covered	Time	Text/Ref	Teaching Method
1	Process-to-Process Delivery	45	A	BB
2	User Datagram Protocol (UDP)	45	A	BB
3,4	Transmission Control Protocol (TCP)	90	A	BB
5	Stream Control Transmission Protocol (SCTP)	45	A	BB
6	Congestion Control • Introduction • Traffic Descriptor • Traffic Profiles	45	A	BB/PPT
7	Congestion Control • Open Loop Congestion Control • Closed Loop Congestion Control	45	A	BB/PPT
8	Quality of Service • Introduction • Flow Characteristics	45	A	BB/PPT
9	Quality of Service • Techniques to improve QoS Scheduling Traffic Shaping	45	A	BB/PPT
10	Quality of Service • Techniques to improve QoS Admission Control Resource Reservation	45	A	BB/PPT
11	Data Traffic	45	A	BB
12	Revision	45	-	BB

UNIT V

Application Layer

Domain Name System (DNS): Domain Name Space – Distribution of Name Space – DNS in the Internet– World Wide Web and HTTP – Simple Mail Transfer Protocol – File Transfer Protocol –Secure Shell (SSH)- TELNET. Network Management and Security: Network Management: Simple Network Management Protocol (SNMP) - Symmetric key cryptography - Security services - PGP - Firewalls.

Session No	Topics to be covered	Time	Text/Ref	Teaching Method
1	Domain Name System (DNS)- Domain Name Space	45	A	BB
2	Distribution of Name Space- DNS in the Internet	45	A	PPT
3	World Wide Web and HTTP	45	A	PPT
4	Simple Mail Transfer Protocol	45	A	PPT
5	File Transfer Protocol	45	A	PPT
6	Secure Shell (SSH)- TELNET	45	A	BB
7	Network Management and Security	45	A	BB
8	Network Management: Simple Network Management Protocol (SNMP)	45	A	BB
9	Symmetric key cryptography	45	A	BB
10	Security services - PGP	45	A	BB
11	Firewalls	45	A	BB
12	Revision	45	-	BB

Text Book and References :	
1.	Behrouz A.Forouzan, Data Communication and Networking, 5th Edition, Tata McGraw-Hill, 201

SUBJECT IN CHARGE **HOD** **PRINCIPAL**