SEMESTER –VI
PAPER VII a- BASICS OF NETWORKS

UNIT - I

Components of the Computer Network.
Introduction to Computer Networks – Advantages of Networking, Peer-to-Peer and Client/Server Network. Network Topologies –. Type of Networks and Internet, Ethernet, Wi-Fi, Bluetooth, Mobile Networking, Wire and wireless Networking.

UNIT - II

Crimping & Punching
Communication Media & Connectors –Unshielded twisted-pair (UTP), shielded twisted-pair (STP), Fiber Optic and coaxial cable: RJ-45, RJ-11, BNC. Understanding color codes of CAT5 cable.

UNIT - III

Configuration of Data communication equipments.
Network Components –Modems, Firewall, Hubs, Bridges, Routers, Gateways, Repeaters, Transceivers, Switches, Access point, etc. –their types, functions, advantages and applications.
IP Routing in Network RIP IGRP

UNIT - IV

Applications - Sessions and presentation aspects - DNS, Telnet, rlogin, FTP, SMTP – WWW-Basics of Firewalls

UNIT-V

Frame Relay-Packet switching networks-Frame Relay networks, Asynchronous transfer mode-ATM protocol Architecture-ATM Logical connection-ATM cells-ATM service categories – ATM adaption layer(AAL)

References:
PRACTICAL - HARDWARE & NETWORK LAB

1) Connecting & disconnecting computer peripherals and components & driver installation

2) OS installation like Windows XP, Windows 7, 8, 10

3) OS installation like FAT, NTFS

4) Basic trouble shoots using beep Sound

5) Dual OS installation

6) Assigning and identifying valid IP Addresses.

7) Configure network computers using switch

8) Installation of Network Interface Card (NIC).
Acharya Nagarjuna University  
Nagarjuna Nagar, Guntur Dist., A.P.  
B.Sc. Computer Maintenance Syllabus, CBSC from 2015-'16  
w.e.f.2015-2016 (Modified in April 2016)

SEMESTER –VI  
PAPER VII a- BASICS OF NETWORKS  
Model Question Paper

Answer any Five Questions.  

1. Explain client / server network model  
2. What is the difference between Bluetooth and Wi-Fi?  
3. Explain different types of network cable  
4. Explain color coding of cat5 cable  
5. Explain network components and how they are used  
6. How to assign IP routing in network  
7. Explain about DNS, FTP in detail  
8. Explain basics of firewall in computer network  
9. Explain frame relay networking with diagram  
10. Explain Asynchronous Transfer Mode protocol Architecture  

5 X 15= 75 Marks
SEMESTER – VI

PAPER VIII b:: ADVANCED NETWORK CONCEPTS

UNIT – I
Different Transmission Medias – Ethernet Cards and Standards – Connectors RJ45 – Cross-cabling and Direct cabling.

UNIT - II
Networking Components – Hubs – Bridges – Switches – Switching and Forwarding Routers – Brouters - Gateways

UNIT -III
Addressing – Sub netting – Domain concepts

UNIT-IV

UNIT – V
Introduction – transport layer – socket introduction - TCP sockets – UDP sockets - raw sockets – Socket options - I/O multiplexing – Name and address conversions

References:


2. Andrew Tanenbaum Computer Networks PHI
PRACTICAL: UNIX AND NETWORK PROGRAMMING LAB

1. Program using system calls: create, open, read, write, close, stat, fstat, lseek
2. Program to implement inter process communication using pipes
3. Program to perform inter process communication using message queues
4. Program to perform synchronization using semaphores
5. Program using TCP sockets (Client and Server)
6. Program using UDP sockets (Client and Server)
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SEMESTER –VI

PAPER VIII b:: ADVANCED NETWORK CONCEPTS

Model Question Paper

Answer any Five Questions. 5 X 15= 75 Marks

1. Explain Ethernet Cards and Standards
2. What is the difference between cross cable and straight cable in networks?
3. What is the purpose and functions of network devices?
4. Explain gateway in computer network
5. Explain network addressing and sub netting
6. Define domain? Explain domain concepts in networking
7. Explain Simple Mail Transfer Protocol
9. Explain the various TCP socket options in detail
10. Explain name and address conversions in network