GUJARAT TECHNOLOGICAL UNIVERSITY
M.E. Computer Engineering
(Wireless Mobile Computing)
Semester: I

Subject Name: **Advanced Computer Networks**
Subject Code: **715304**

Course Content:

Introduction:
Overview of computer networks, seven-layer architecture, TCP/IP suite of protocols, etc. MAC protocols for high-speed LANS, MANs, and wireless LANs. (For example, FDDI, DQDB, HIPPI, Gigabit Ethernet, Wireless ethernet, etc.) Fast access technologies. (For example, ADSL, Cable Modem, etc.)

IPv6:
Why IPv6, basic protcol, extensions and options, support for QoS, security, etc., neighbour discovery, auto-configuration, routing. Changes to other protocols. Application Programming Interface for IPv6. 6bone.

Mobility in networks:
Mobile IP. Security related issues. IP Multicasting. Multicast routin protocols, adderss assignments, session discovery, etc. TCP extensions for high-speed networks, transaction-oriented applications. Other new options in TCP Network security at various layers: Secure-HTTP, SSL, ESP,Authentication header, Keydistribution protocols. Digital signatures, digital certificates

Text Books:

1. Forouzan, Data Communications and Networking, TMH
2. Unix network programming by W. Richard stevens/Addison Wesley

Reference Book:

1. Advanced Computer Network by Dayanand Ambawade / DreamTech press