

## Paper – III

M.Phil. / Pre-Ph.D., Course Work

### WIRELESS AD HOC NETWORKS

#### UNIT-1:

*Introduction to Wireless Communication*

Evolution of Mobile Radio Communication, Mobile Radio Telephony, Mobile Radio System around the World, Examples of Wireless Communication System, Trends in Cellular Radio and Personal Communication.

#### UNIT-2:

*Modern Wireless Communication*

Second generation (2G) cellular networks, evolution of 2.5 G wireless mobile networks, evolution for 2.5 G TDMA networks, IS-95B for 2.5 G CDMA, Third generation 3G wireless networks, Wireless local loop WLL, Wireless local area networks WLAN.

#### UNIT-3:

*Introduction to Wireless Ad-hoc Networks.*

Introduction and definition, Ad hoc network characteristics, wireless network taxonomy, Ad hoc network application. The battle field, urban and campus grids, case for opportunistic ad hoc networking. Design challenges, the layer interaction mobility scaling. Evaluating ad hoc network protocols.

#### UNIT-4:

*Collision Avoidance Protocols.*

Performance of collision avoidance protocols, Approximate analysis  
Numerical results; Simulation results

(PTO)