ADHOC NETWORKS

Sub Code : 10CS841 **IA Marks : 25**
Hrs/Week : 04 **Exam Hours : 03**
Total Hrs : 52 **Exam Marks : 100**

PART – A

UNIT – 1 **6 Hours**

Introduction: Ad hoc Networks: Introduction, Issues in Ad hoc wireless networks, Ad hoc wireless internet.

UNIT – 2 **7 Hours**

MAC – 1: MAC Protocols for Ad hoc wireless Networks: Introduction, Issues in designing a MAC protocol for Ad hoc wireless Networks, Design goals of a MAC protocol for Ad hoc wireless Networks, Classification of MAC protocols, Contention based protocols with reservation mechanisms.

UNIT – 3 **6 Hours**

MAC – 2: Contention-based MAC protocols with scheduling mechanism, MAC protocols that use directional antennas, Other MAC protocols.

UNIT – 4 **7 Hours**

Routing – 1: Routing protocols for Ad hoc wireless Networks: Introduction, Issues in designing a routing protocol for Ad hoc wireless Networks, Classification of routing protocols, Table drive routing protocol, On-demand routing protocol.

PART- B

UNIT – 5 **6 Hours**

Routing – 2: Hybrid routing protocol, Routing protocols with effective flooding mechanisms, Hierarchical routing protocols, Power aware routing protocols

UNIT – 6 **7 Hours**

Transport Layer: Transport layer protocols for Ad hoc wireless Networks: Introduction, Issues in designing a transport layer protocol for Ad hoc wireless Networks, Design goals of a transport layer protocol for Ad hoc wireless Networks, Classification of transport layer solutions, TCP over Ad hoc wireless Networks, Other transport layer protocols for Ad hoc wireless Networks.

UNIT – 7 **6 Hours**

Security : Security: Security in wireless Ad hoc wireless Networks, Network security requirements, Issues & challenges in security provisioning, Network security attacks, Key management, Secure routing in Ad hoc wireless Networks.

UNIT – 8 **7 Hours**

QoS: Quality of service in Ad hoc wireless Networks: Introduction, Issues and challenges in providing QoS in Ad hoc wireless Networks, Classification of QoS solutions, MAC layer solutions, network layer solutions.

Text Books:

1. C. Siva Ram Murthy & B. S. Manoj: Ad hoc Wireless Networks, 2nd Edition, Pearson Education, 2005

Reference Books:

1. Ozan K. Tonguz and Gianguigi Ferrari: Ad hoc Wireless Networks, John Wiley, 2007.
2. Xiuzhen Cheng, Xiao Hung, Ding-Zhu Du: Ad hoc Wireless Networking, Kluwer Academic Publishers, 2004.
3. C. K. Toh: Adhoc Mobile Wireless Networks- Protocols and Systems, Pearson Education, 2002.