ADHOC NETWORKS
(Professional Elective –IV)

Course Code	20IT4702A	**Year**	IV	**Semester**	I
Course Category	PE IV	**Branch**	IT	**Course Type**	Theory
Credits	3	**L-T-P**	3-0-0	**Prerequisites**	Computer Networks
Continuous Internal Evaluation :	30	**Semester End Evaluation:**	70	**Total Marks:**	100

Course Outcomes		**Blooms Taxonomy Level**
Upon Successful completion of course, the student will be able to		
CO1	Understand the principles of Ad Hoc wireless networks.	L2
CO2	Apply principles of different access control protocols.	L3
CO3	Use the concepts of different routing protocols in real scenarios.	L3
CO4	Analyze the concepts of transport layer and security protocols.	L4

Contribution of Course Outcomes towards achievement of Program Outcomes & Strength of Correlations (H:High,M:Medium,L:Low)														
	PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**	**PSO1**	**PSO2**
CO1	3												3	
CO2	3												3	
CO3		3											3	
CO4		3											3	

Syllabus		
Unit No	**Contents**	**Mapped CO**
I	**Ad Hoc Wireless Networks: Introduction**-Cellular and Ad Hoc Wireless Networks, Applications of Ad Hoc Wireless Networks, Issues in Ad Hoc Wireless Networks- Medium Access Scheme, Routing, Multicasting, Transport Layer Protocols, Pricing Scheme, Quality of Service Provisioning, Ad Hoc Wireless Internet.	**CO1**
II	**Mac Protocols For Ad Hoc Wireless Networks** – Design Goals of A Mac Protocol For Ad Hoc Wireless Networks, Classifications of MAC protocols, Contention-Based Protocols- MACAW: A Media Access Protocol for Wireless LANs, Floor Acquisition Multiple Access Protocols, Contention-Based Protocols With Reservation Mechanisms- Distributed Packet Reservation Multiple Access Protocol, Collision Avoidance Time Allocation Protocol.	**CO1 CO2**

III	**Routing Protocols:** Issues In Designing A Routing Protocol For Ad Hoc Wireless Networks, Classifications of Routing Protocols, Table-Driven Routing Protocols-Destination Sequenced Distance-Vector Routing Protocol, Wireless Routing Protocol, On-Demand Routing Protocols-Dynamic Source Routing Protocol, Ad Hoc On-Demand Distance Vector Routing Protocol.	**CO1CO3**
IV	**Multicast Routing In Ad Hoc Wireless Networks**: Issues in designing multicast routing protocols, Classification of Multicast Routing Protocols, Tree-Based Multicast Routing Protocols-Bandwidth-Efficient Multicast Routing Protocol, Multicast Routing Protocol Based on Zone Routing, Mesh-Based Multicast Routing Protocols-On-Demand Multicast Routing Protocol, Dynamic Core-Based Multicast Routing Protocol.	**CO1CO3**
V	**Transport Layer And Security Protocols For Ad Hoc Wireless Networks:** 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, Network Security Requirements, Issues and Challenges in Security Provisioning, Network Security Attacks-Network Layer Attacks.	**CO1 CO4**

Learning Resources
Text Books
1. C.Siva Ram Murthy, B.S. Manoj, "Ad hoc wireless networks-Architectures and protocols" Pearson Education, 2014
References
1. Stefano Basagni, Marco Conti, "Mobile ad hoc networking", Wielyinterscience 2004 2. Charles Kadushin , Understanding Social Networks: Theories, Concepts, and Findings
E- Resources and other Digital Material 1. https://www.coursera.org/learn/social-network-analysis 2. https://onlinecourses.nptel.ac.in/noc20_cs78/