MODULE 1

1. Sketch and distinguish between Cellular Wireless Networks and ADHOC Wireless Networks.
2. Determine the protocol which is tree-shaped topology provides high multicast efficiency, with low packet delivery ratio due to the frequency tree breaks and its major issues.
3. Discuss about the issues in the Transport Layer Protocol and Self-Organization that need to be considered when an ADHOC wireless system is to be designed.
4. Sketch the Schematic diagram of Ad Hoc Wireless Internet which extends the services of the internet to the end users over an ad hoc wireless network.
5. Why Adhoc networks are important in military applications? explain briefly.
6. Construct and explain the infrastructure of cellular and adhoc wireless networks.
7. Demonstrate wireless sensor and mesh network in the applications of adhoc wireless networks in detail.
8. Due to the mobility nature security is the major concern in Adhoc Networks, Explain security issues in adhoc network in detail.
9. Summarize, why Power management and position of nodes are important in wireless sensor networks?
10. Explain challenges that are faced during the implementation of routing protocols due to its mobility nature and infrastructure less characteristics.
11. Adhoc Networks infrastructures are spontaneously build and are used in emergency operations. How?
12. Illustrate adhoc wireless internet with schematic diagram keeping the infrastructure in reference.
13. The network is adhoc because it does not rely on pre existing infrastructure. Explain self organization and security issues in detail.
14. Adhoc Networks are battery operated. Why Power management important in wireless sensor networks?
15. Explain challenges that are faced during the implementation of routing protocols due to its mobility nature and infrastructure less characteristics.
16. Illustrate briefly issues related to pricing scheme ,addressing and scalability in adhoc wireless networks
17. Demonstrate wireless sensor and mesh network in the applications of adhoc wireless networks in detail.
18. The network is adhoc because it does not rely on pre existing infrastructure. Explain self organization and security issues in detail.

MODULE 2

1. Explain Collision Avoidance Time Allocation Protocol (CATA) using the frame structure.
2. Summarize all the steps in 5-phase reservation protocol with frame structure.
3. Illustrate the Issues and Design Goals of a Mac Protocol for Ad Hoc Wireless Networks.
4. Sketch the Adhoc network MAC protocols which can be classified into four basic types.

5. Summarize any 2 synchronous protocols from the contention-based protocols with reservation mechanisms with neat diagram

6. What is soft reservation multiple access with priority assignment? explain with its frame structure
7. Explain the design goals of Medium Access Control protocol for adhoc wireless protocol
8. Summarize Hop reservation multiple access protocol with its frame structure in detail.
9. Define Medium Access Control protocol and recall its importance in Adhoc wireless Networks.
10. Considering the mobility nature of adhoc networks what is hidden and exposed terminal problems.
11. Illustrate DPRMA protocol considering the mobility nature of adhoc networks and its infrastructure.
12. Explain Information Frame and Reservation Frames that must bedetermined heuristically for the network.
13. Identify two components of RTMA control fortransmitting real time data in wireless adhoc networks in detail.
14. Experiment the establishment slot assignments based on time divisionmultiple access of five phase reservation protocol.
15. Develop MACA with piggy Backed reservation in Asynchronous Protocol to provide real time traffic support in multihop wireless networks.
16. Explain Collision Avoidance Time Allocation Protocol (CATA) using the frame structure.

MODULE 3

1. Sketch the classification of routing protocols for Ad Hoc wireless networks which can be broadly classified into 4 categories.
2. Discuss the Characteristics of an Ideal Routing Protocol for adhoc wireless networks.
3. Summarize the routing protocols which comes under the efficient flooding mechanisms.
4. Demonstrate the Cluster-Head Gateway Switch Routing Protocol with its advantages and disadvantages.
5. Elaborate the Destination Sequenced Distance-Vector Routing Protocol with its advantages and disadvantages.
6. Adhoc networks are infrastructure less and if its nodes are in moving state then explain how does it affect routing protocol.
7. Make use of routing protocol and simplify how routers communicate with each other based on its metrics.
8. The network is adhoc since it does not rely on pre-existing infrastructure.Identify the issues in designing routing protocol for adhoc networks.
9. Explain how hidden and exposed terminals affect the routing adhoc networks when few nodes are within the transmission range and some arenot in the range.
10. Construct Wireless Routing protocol that introduces mechanism which reduces root loops and ensure reliable message transfer with an example.
11. Build an Overview on AODV protocol that builds routes between nodes only as desired by source node with an example

12. Explain the proactive and reactive concept in update mechanism of routing protocols briefly.
13. Organize and execute the path-finding On-Demand routing protocol with any one example.
14. Build an Overview on internal and peripheral nodes of zone routing protocol in hybrid protocol.

MODULE 4

1. Discuss about the design goals of a transport layer protocol for Adhoc wireless networks.
2. Summarize any two protocols which comes under the other transport layer protocols for adhoc wireless networks.
3. Elaborate the Adhoc TCP with its advantages and disadvantages with neat diagram.
4. Summarize any three End to End Approach which comes under the TCP over Adhoc wireless networks with neat diagram
5. Discuss briefly the reasons why TCP does not perform well in Adhoc wireless network.
6. Explain how completely decoupled transport layer is a issue in designing a transport layer protocol for adhoc wireless networks
7. Illustrate application controlled transport protocol improves the performance of adhoc networks in different layers.
8. Identify issues in designing a transport layer protocol for adhoc wireless networks for setting end to end connections.
9. Explain how induced traffic is a issue in designing a transport layer protocol for adhoc wireless networks
10. Illustrate the reason why TCP does not perform well in adhoc wireless networks behind throughput degradation.
11. Demonstrate how Feedback based TCP-F improves the performance of TCP using feedback approach.
12. Demonstrate TCP-BUS with buffering capability and sequence information improves the performance of adhoc wireless networks.
13. Define TCP with explicit link failure notification improves the performance in adhoc wireless networks.
14. Illustrate ATCP thin layer and ATCP state diagram improves adhoc networks performance based on feedback information.

MODULE 5

1. Shared broadcast radio channel used for communication effects security in adhoc networks define.
2. Symmetric key algorithms rely on the presence of shared key .Explain substitution and transposition

3. Demonstrate security aware adhoc on demand distance vector routing protocol used for redirecting packets.
4. Explain how self stability impacts security in adhoc wireless networks and to revert to its normal operating system.
5. Illustrate secure efficient adhoc distance vector routing protocol based on distance sequenced distance routing vector routing algorithm.
6. Demonstrate Network layer attacks pertaining to the network layer in the network protocol stack.
7. Recall how Adhoc wireless networks pose certain specific challenges in the key management due to the lack of infrastructure.
8. Demonstrate the level of trust metrics in security aware adhoc routing protocols which is the key metrics in path finding.
9. Explain authenticated routing for adhoc networks which takes care of authentication, message integrity, and non repudiation.
10. Describe about the main approaches of key management is to share a secret (some information) among a specified set of participants.
11. Discuss about the types of attacks pertaining to the network layer in network protocol stack
12. Demonstrate about the Issues and Challenges in Security Provisioning.
13. Summarize the attacks on adhoc wireless networks which can be classified into 2 broad categories .
14. Discuss about the security protocol for adhoc wireless networks should satisfy the following requirements.