Chapter 1
Introduction to Ad Hoc Wireless Network

1. Ad Hoc Wireless Networks are
   A. Single-Hope Wireless Network
   B. Multi-Hop Wireless Network
   C. Both A and B
   D. None of the Above

2. What is MANET?
   A. Multiple and network
   B. Mobile ad hoc network
   C. Main ad hoc network evaluation
   D. Multiple ad hoc network

3. Ad-hoc network to connect each computer using network topology
   A. Tree
   B. Star
   C. Mesh
   D. Bus

4. Ad Hoc Wireless Networks are
   A. Infrastructure less network
   B. Fixed Infrastructure network
   C. Both A and B
   D. None of the above.

5. AWN has …….
   A. Guaranteed bandwidth
   B. Shared radio channel
   C. Both A and B
   D. None of the above

6. Application of AWN
    A. Military Application
    B. Emergency operations
    C. Wireless mesh network
    D. All of the above
7. Mobility of nodes is the issue of sensor networks.
    A. Yes
    B. No

8. Power sources used in sensor network
    A. Replenish able
    B. Non-replenish able
    C. Regenerative
    D. All of the above

9. Major advantages of hybrid wireless network.
    A. Higher capacity than cellular networks
    B. Increased flexibility and reliability in routing.
    C. Both A and B
    D. None of the above

10. What is MAC?
    A. Medium Access control protocol.
    B. Medium Access communication protocol.
    C. Multiple Access control protocol.
    D. Multiple Access communication protocol.

11. Design issue in MAC protocol.
    A. Hidden terminal
    B. Size of network.
    C. Density of deployment

D. None of the above.

12. Hidden terminals are the nodes that are hidden from
    A. Sender
    B. Receiver
13. Access delay refers to
    A. Maximum delay that any packet experiences
    B. Minimum delay that any packet experiences
    C. Average delay that any packet experiences
    D. All of the above

14. Challenges that a routing protocol faces are:
    A. Mobility
    B. Bandwidth constraint
    C. Location dependent contention
    D. All of the above

15. What is CBT protocol?
    A. Core based trees protocol
    B. Central based trees protocol
    C. Core base transfer protocol
    D. Central based transfer protocol

16. What is DVMRP?
    A. Distance vector multicast routing protocol
    B. Distributed vector multicast routing protocol
    C. Defined vector multicast routing protocol
    D. Distinct vector multicast routing protocol

17. Is scalability a major issue in designing multicast routing protocol
    A. Yes
    B. No
    C. May be

D. May not be

18. The major performance degradation faced by a reliable connection-oriented transport layer protocol such as transmission control protocol (TCP) in an ad hoc wireless network arises due to
    A. Frequent path breaks
    B. High channel error rate
    C. Frequent network partitions.
    D. All of the above

19. The latency associated with the reconfiguration of a broken path and the use of route caches result in
    A. Frequent path breaks
    B. Stale route information at the nodes
    C. Mobility
    D. None of the above

20. The attack effected by making the network resource unavailable for service to other nodes, either by consuming the bandwidth or by overloading the system, is known as
    A. Resource consumption
    B. Bandwidth depletion
    C. Denial of service
    D. None of the above

CHAPTER 2
MAC PROTOCOLS FOR AD HOC WIRELESS NETWORKS

1. The hidden and exposed terminal problems significantly reduce
   A. Mobility
   B. Security
   C. Throughput
   D. All of the above

2. The possibility of packet collisions is quite high in wireless networks.
   A. Yes
   B. No

3. Design goals of MAC protocol for AWN.
   A. The operation of the protocol should be distributed.
   B. The protocol should provide QoS support for real-time traffic.
   C. The available bandwidth must be utilized efficiently
   D. All of the above

4. Ad hoc network MAC protocols can be classified into
   A. Contention-based protocols
   B. Contention-based protocols with reservation mechanisms
   C. Contention-based protocols with scheduling mechanisms
   D. All of the above

5. Synchronous protocols require time synchronization among
   A. Some nodes in network
   B. Only interior nodes in network
   C. All nodes in network
   D. peripheral nodes in network

6. Control packet used by MACA
   A. RTS packet

B. CTS packet
C. Both A and B
D. None of the above.

7. MACA implements
   A. Per flow fairness
   B. Per node fairness
   C. Both A and B
   D. None of the above.
8. Control packet used by MACAW
   A. RTS
   B. CTS
   C. ACK
   D. All the above

9. In MACAW, the error recovery responsibility is given to
   A. Network layer
   B. Presentation layer
   C. Data link layer
   D. Transport layer

10. The busy tone multiple access protocol is proposed for overcoming
    A. Exposed terminal problem
    B. Hidden terminal problem
    C. Mobility problem
    D. Scalability problem

11. In BTMA protocol bandwidth utilization is
    A. Good
    B. Average
    C. Poor
    D. Moderate

12. In DBTMA Protocol the transmission channel has
    A. Data packets
    B. Control packets
    C. Both A and B
    D. None of the above

13. What is RI-BTMA
    A. Router initiated busy tone multiple access protocol.
    B. Robot initiated busy tone multiple access protocol.
    C. Receiver initiated busy tone multiple access protocol.
    D. None of the above.

14. MACA-by invitation is a
    A. Source initiated protocol.
    B. Receiver initiated protocol.

15. In MACA-BI the receiver node initiates data transmission by transmitting
    A. RTS control packet
    B. CTS control packet
    C. RTR control packet
    D. ACK control packet

16. MARCH is
    A. Source initiated protocol.
    B. Receiver initiated protocol.

17. In MARCH, the MAC layer has access to tables that maintain
    A. Network information
    B. Node information
    C. Link information
    D. Routing information

18. D-PRMA was proposed for _____ support in a AWN

A. Text
B. Image
C. Voice
D. All the above

19. The collision avoidance time allocation protocol (CATA)is based on
A. Dynamic topology dependent transmission scheduling.
B. Static topology dependent transmission scheduling.
C. Both A and B.
D. None of the above.

20. Contention-Based Protocols focuses on
A. Bandwidth reservation.
B. Packet scheduling.
C. Both A and B
D. None of the above.

CHAPTER 3

ROUTING PROTOCOLS FOR AD HOC WIRELESS NETWORKS

1. Route computation and maintenance must involve
    a. Minimum Number of nodes
    b. Maximum number of nodes
    c. Moderate number of nodes
    d. None of the above
2. The routing protocols for ad hoc wireless networks can be broadly classified into
    a. Routing information update mechanism
    b. Use of temporal information for routing
    c. Routing topology
    d. All of the above
3. In table-driven routing protocols, every node maintains the
    a. Neighboring node information
    b. All node information
    c. Network topology information
    d. None of the above
4. On demand routing protocols exchange routing information periodically?
    a. Yes
    b. No
5. The routing decisions in Power-aware routing protocols are based on minimizing the power consumption either _____
    a. Globally
    b. Locally
    c. Both A and B
    d. None of the above
6. Protocols belonging toGeographical information assisted routingimprove the performance of routing and _____
    a. Increases the control overhead

b. Reduce the control overhead

7. What is DSDV?
    a. Destination sequenced distance-vector routing protocol
    b. Dynamic sequenced distance-vector routing protocol
    c. Distributed sequenced distance-vector routing protocol
    d. None of the above
8. DSDV is?
    a. Table driven routing protocol
    b. On-demand routing protocol
    c. Hybrid routing protocol
    d. Hierarchical routing protocols
9. Even a small network with high mobility or a large network with low mobility can completely choke the available bandwidth in DSDV.
    a. No
    b. Yes
10. Wireless routing protocol differs for DSDV in
    a. Route maintains
    b. Route establishment
    c. Table maintains
    d. None of the above
11. WRP maintains
    a. Distance table
    b. Routing table
    c. Link cost table
    d. All of the above
12. The cluster-head gateway switch routing protocol (CGSR) [8] uses a
    a. Flat network topologies
    b. Hierarchical topologies
    c. Both A and B
    d. None of the above
13. CGSR organizes nodes into clusters, with coordination among the members of each cluster entrusted to a special node named _____

a. Cluster node
b. Cluster coordinator
c. Cluster head
d. Cluster route

14. In STAR protocol During initialization, a node sends an update message to
    a. All nodes in network
    b. Neighbor nodes
    c. Destination node
    d. Source node
15. Which protocol has a very low communication overhead among all table driven routing protocols.
    a. DSDV
    b. CGSR
    c. WRP
    d. STAR
16. Dynamic source routing protocol (DSR) is an
    a. Table driven protocol
    b. On-demand routing protocol
    c. Hybrid routing protocol
    d. Hierarchical routing protocols
17. In AODV, the source node and the intermediate nodes store the
    a. Complete path information
    b. Complete topology information
    c. Next-hop information
    d. None of the above
18. Temporally ordered routing algorithm is
    a. Destination initiated
    b. Source initiated
    c. Both A and B
    d. None of the above
19. The applicability of Location-aided routing protocol depends heavily on the availability of GPS infrastructure or similar sources of location information.
    a. True

b. False

20. Flow-oriented routing protocol (FORP) is an
    a. Table driven protocol
    b. On-demand routing protocol
    c. Hybrid routing protocol
    d. Hierarchical routing protocols