

## Possible Sixteen Mark Questions

Sub Code: EC2050

Year/Semester: IV/VIII Sem

Sub: Mobile Adoc Network

Branch: ECE

### UNIT I

1. What are the characteristics and features of ad hoc networks?
2. Explain path loss and fading in detail.
3. Explain the two main forms of interference, Doppler shift and Nyquist theorem.
4. Explain the applications areas of ad hoc networks.
5. Explain the characteristics of wireless channels.
6. Explain ad hoc indoor mobility models in detail.
7. How mobility can be supported in today's internet? Explain using the WAP model. Comment on its challenges in maintaining ad hoc networks that are connect to internet.
8. Differentiate between cellular network and AdHoc Network.
9. What is replay attack? How it can be prevented?
10. List out the major advantages of Adhocwireless Internet.
11. Discuss the Pros and Cons of a routing protocol that uses GPS information for an Adhoc wireless Network for search and rescue operation.

### UNIT II

1. Explain MACAW protocol in detail.
2. Explain the contention based protocols with scheduling and reservation in detail.
3. Explain the HIPERLAN standards in detail.
4. Explain 802.11g IEEE standard in detail.
5. List and explain the issues in designing a MAC protocol for ad hoc wireless networks.
6. How are directional antennas superior to MACAW? Explain with an example.
7. List the important goals of designing a MAC protocol for ad hoc wireless networks.
8. Illustrate various steps involved in five phase reservation protocol with its frame format
9. How is scheduling mechanism achieved in distributed wireless ordering protocol? Explain in detail. How are Information symmetry and perceived collisions handled?
10. What are the advantages of reservation based MAC protocol over contention based MAC protocol?
11. What are the advantages and disadvantages of MAC protocol using directional antennas?

12. Name the three MAC services provided by the IEEE 802.11 that are not provided in the traditional LAN's such as 802.3.

13. Discuss the various HIPERLAN standards defined for wireless Networks by ETSI.

### UNIT III

1. With suitable trace, explain the route establishment in location aided routing.
2. Devise a pseudo code that presents various steps involved in neighbor Degree- Based preferred link algorithm.
3. How is routing table constructed in fisheye state routing protocol? Explain in detail.
4. Discuss table driven protocols with examples.
5. Explain multicast routing algorithms in detail.
6. How routing table is constructed in fisheye state routing protocol? Explain in detail.
7. List the characteristics of ideal routing protocol for ad hoc wireless network.
8. Classify and explain ad hoc wireless network based on routing topology.
9. Explain the types of ad hoc network routing protocols based on routing information update mechanism.
10. Explain on demand routing protocol in detail.
11. Explain the major challenges that a routing protocol designed for ad hoc wireless networks face.
12. Describe how the packets are transmitted in multiple access collision avoidance protocol.
13. Explain the scheduling table update mechanism in distributed priority scheduling.

### UNIT IV

1. Explain feedback based TCP and TCP BUS in detail.
2. Explain ad hoc TCP states and event action mapping in detail.
3. Explain the significance and design goals of transport layer protocol for ad hoc network.
4. Explain the issues in designing a transport layer protocol for ad hoc wireless networks.
5. Why does TCP not perform well in ad hoc wireless network? Explain.
6. With any five major reasons, analyze why TCP is exposed to significant throughput degradation in ad hoc networks.
7. List and brief various network and transport layer attacks in detail.
8. Explain various network and application layer security attacks in detail.
9. Discuss the effect of multiple breaks on a single path at the TCP- F sender.
10. What is the impact of the failure of proxy nodes in split- TCP?

11. Explain how the security provisioning in adhoc network differs from that in infrastructure based network.

12. List out and explain how some of the internet properties of the wireless Adhoc networks introduce difficulties while implementing security in routing protocols.

#### UNIT V

1. Explain integration of adhoc with mobile IP networks in detail.

2. Explain the operation of optimizing sub system (OSS)

3. Explain the cross over time prediction.

4. Explain COA, reverse tunneling and route optimization.

5. Discuss briefly cross layer optimization technique in detail.

6. Explain the significant challenges of generic cross layer design.

7. List the issues of utmost importance in mobile IP.

8. Explain the various issues and solutions for integrating MANET'S to internet in detail.

9. Explain the features of a cross-layer model designed for multiuser scheduling. Also highlight how efficiency is improved through this model.

10. How link/MAC layer optimization is achieved with respect to its higher layers and physical layer? Also write its impact on bit rate and power control.

11. Describe how to integrate Adhoc with mobile IP. What are the advantages?

12. Explain any one of the cross layer optimization method and how it improve the performance of the routing Adhoc networks.