Reg. No. : | | | | | | | | | | |

Question Paper Code: 31488

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2017

Elective

Electronics and Communication Engineering

01UEC902 - MOBILE AD-HOC NETWORKS

(Regulation 2013)

Duration: Three hours   Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. List the applications of MANET.

2. Mention the characteristics of wireless channel.

3. What are the issues of designing a MAC protocol for ad-hoc networks?

4. Differentiate between HRMA and SRMA.

5. Give the classifications of routing protocol in MANET.

6. Classify routing protocols based on the routing information update   mechanism.

7. Assume that the TCP sender experiences a timeout when the current congestion window size is 48 KB. Considering the MSS of 1KB, calculate the size of the congestion window for which the next three transmissions will be successful.

8. List the issues in designing transport layer protocol.

9. Give detail about cross layer optimization

10. List the factors that affect effective cross layer design.

PART - B (5 x 16 = 80 Marks)

11. (a) (i) Differentiate between cellular network and Ad hoc network.   (8)

    (ii) Discuss the applications of mobile ad hoc networks and explain it.   (8)

(b) (i) List the characteristic features of ad hoc network. Explain the characteristics features in detail. (6)

    (ii) Classify the mobility models of mobile ad-hoc networks and explain it. (10)

12. (a) (i) Explain 802.11g IEEE standard in detail. (4)

    (ii) List the design goals of MAC protocol for ad hoc networks. (4)

    (iii) Compare the IEEE standards: 802.11a, 802.11b, 802.11g, and 802.15. HIPERLAN. (8)

Or

(b) (i) Explain the contention-based protocols with required diagrams. (10)

    (ii) Compare HIPERLAN, HIPERLAN2, HIPERLAN3 and HIPERLAN4. (6)

13. (a) (i) Describe Tree-based multicast routing protocol in detail. (8)

    (ii) Explain the Hierarchical routing protocol in detail. (8)

Or

(b) List the QOS challenges and explain why QOS is hard in MANET? Explain the services and routing protocols in detail. (16)

14. (a) (i) List the design goals of a transport layer protocol for ad hoc wireless networks. (4)

    (ii) Classify the transport layer solutions. (4)

    (iii) Explain Ad hoc TCP in detail. (8)

Or

(b) Explain the network security attacks in detail. (16)

15. (a) Why Integration of Ad-hoc with Mobile IP Networks is required? Explain this integration concept in detail. (16)

Or

(b) Explain the Cross layer cautionary perspective in detail. (16)

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