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Question Paper Code : 73431

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

Eighth Semester

Electronics and Communication Engineering

EC 2050/EC 804/10144 ECE 53 — MOBILE ADHOC NETWORKS

(Regulations 2008/2010)

(Common to PTEC 2050- Mobile Adhoc Networks for BE (Part-Time) Seventh Semester – ECE- Regulations 2009)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Define Ad Hoc Networks.
2. Differentiate infrastructure and infrastructure less network.
3. Define synchronous protocol.
4. Classify the channel of D-PRMA.
5. Differentiate Proactive and reactive routing protocol.
6. What are the advantages of hierarchical routing protocol?
7. List down the security issues in adhoc networks.
8. Write the important objectives of TCP.
9. What is the need for Cross Layer Design in Adhoc networks?
10. Define Cross layer Cautionary Perspective.

PART B — (5 × 16 = 80 marks)

11. (a) (i) Differentiate between cellular Network and AdHoc Network. (10)
(ii) What is replay attack? How it can be prevented? (6)

Or

- (b) (i) List out the major advantages of adhoc wireless Internet. (6)
(ii) Discuss the Pros and Cons of a routing protocol that uses GPS information for an Adhoc wireless Network for search and rescue operation. (10)

12. (a) (i) What are the advantages of reservation based MAC protocols over contention based MAC protocols? (8)
(ii) Compare and contrast: IEEE 802.11a, IEEE 802.11b and IEEE802.11g. (8)

Or

- (b) (i) With a neat diagram explain the protocol architecture of IEEE 802.15. (8)
(ii) Channel quality estimation can be done both at the sender and the receiver. Which is more advantages? Why? (8)

13. (a) (i) On the basis of routing information update procedure what are the types of Adhoc wireless network routing protocols? Explain. (6)
(ii) List down the ideal characteristics of a routing protocol for a Adhoc wireless networks. (10)

Or

- (b) (i) Explain the concepts involved in energy aware routing and QoS aware routing with suitable scenario. (10)
(ii) On the basis of routing topology what are the types of adhoc wireless networks? Explain. (6)

14. (a) Explain the issues in designing a transport layer protocol for adhoc wireless network. (16)

Or

- (b) Why does TCP fail to perform well in adhoc wireless network? Explain. (16)

15. (a) Give detailed description of Cross Layer Optimization. (16)

Or

- (b) Explain in detail about Integration of Adhoc with mobile IP networks. (16)