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Question Paper Code : 80428

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2021.

Eighth Semester

Electronics and Communication Engineering

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

(Regulations 2008/2010)

(Common to PTEC 2050 for B.E. (Part-Time) Seventh Semester – Regulations 2009)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — ($10 \times 2 = 20$ marks)

1. Compare Ad-hoc Networks and wireless LAN.
2. Define Scalability.
3. What are the goals of Medium Access Protocols?
4. Define HIPERLAN.
5. What is the function of the sequence number in the AODV routing protocol?
6. Why DSDV is not suitable for high mobility networks?
7. List the objectives of transport layer protocol.
8. Why does TCP-F provide a simple feedback based solution?
9. Which is offered by cellular internet protocol?
10. How do you understand deliverability?

PART B — ($5 \times 16 = 80$ marks)

11. (a) Describe the forms of Doppler shift, interference and Nyquist theorem. Write the advantages of hybrid wireless network. (16)

Or

(b) Explain about multipath fading and path loss. (16)

12. (a) List and explain the issues in designing a MAC protocol for adhoc wireless networks. (16)

Or

(b) (i) List the important goals of designing a MAC protocol for adhoc wireless networks. (12)

(ii) Classify and define sender-initiated protocols. (4)

13. (a) Discuss in detail about Unicast Routing Algorithm. (16)

Or

(b) Write short note on:

(i) Energy aware routing algorithm. (8)

(ii) QoS aware routing. (8)

14. (a) (i) Why does TCP not perform well in adhoc wireless networks? What are the changes made to traditional networks to suit adhoc networking environment. (8)

(ii) Briefly describe the attacks pertaining to the network layer. (8)

Or

(b) (i) Explain how security provisioning in adhoc wireless networks differ from that in infrastructure based networks? (8)

(ii) What are the different key management techniques used for Ad Hoc Networks? Explain threshold cryptography. (8)

15. (a) Describe how to integrate adhoc with mobile IP what are the advantages? (16)

Or

(b) Explain any one of the cross layer optimization method and how it improve the performance of the routing adhoc networks. (16)

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