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Question Paper Code: 92032

M.E. DEGREE EXAMINATION, OCTOBER - 2014.

Elective

Computer Science and Engineering

01PCS508 – AD-HOC NETWORKS

(Regulation 2013)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions.

PART A - (10 x 2 = 20 Marks)

1. State any four issues related to Ad - hoc wireless networks.
2. What are the advantages of reservation based MAC protocols over contention based MAC protocols?
3. Mention one advantage and one disadvantage of using LQ and Reply, for finding partial paths in TCP - Bus.
4. List the metrics followed in Power aware routing protocols.
5. What are the major differences between ad - hoc wireless networks and sensor networks?
6. How does the hybrid usage of TDMA and FDMA minimize energy consumption?
7. List the major issues in WSN routing.
8. State the salient features of OLSR protocol.
9. State the difference between self configuration and auto configuration.
10. State the salient features of mesh network.

PART - B (5 x 14 = 70 Marks)

11. (a) Explain in detail the different issues in designing a MAC protocol for Ad - hoc wireless network. (14)

Or

- (b) What are the merits and demerits of using multichannel MAC protocols over single channel MAC protocols? Discuss the working of multichannel MAC protocol. (14)

12. (a) Explain the operation of Bandwidth - Efficient Multicast Routing Protocol (BEMRP). (14)

Or

- (b) (i) Why TCP does not perform well in Ad - hoc wireless networks? (7)
(ii) Write a detailed note on Split TCP operation. (7)

13. (a) Write an elaborate note on Data gathering. (14)

Or

- (b) What are the advantages of Clustered architecture over a Layered architecture in a Sensor network? Elaborate on Clustered architecture. (14)

14. (a) Explain in detail about the different phases of AODV routing protocol. (14)

Or

- (b) Define localization and discuss the different types of localization. (14)

15. (a) Write a detailed note on Opportunistic routing. (14)

Or

- (b) Write short notes on the following:

- (i) IEEE 802.11S architecture (7)
(ii) Vehicular mesh networks. (7)

PART - C (1 x 10 = 10 Marks)

16. (a) Compare the different TCP solutions for Ad - hoc wireless networks. (10)

Or

- (b) What are the issues faced by ODMRP protocol? How it is avoided in Dynamic core based multicasting protocol? Explain. (10)