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10CS/IS841

Eighth Semester B.E. Degree Examination, Feb./Mar. 2022**Adhoc Networks**

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, selecting at least TWO full questions from each part.**PART - A**

- 1 a. Explain any 8 issues need to be considered when designing adhoc wireless networks. (08 Marks)
b. List out any 8 differences between cellular networks and adhoc networks. (08 Marks)
c. Discuss following applications of adhoc wireless networks:
i) Military ii) Emergency operations. (04 Marks)
- 2 a. Explain hidden and exposed terminal problems with a neat diagram. (05 Marks)
b. Explain Collision Avoidance Time Allocation protocol (CATA) frame format with a diagram. (07 Marks)
c. Explain working principle of Five Phase Reservation Protocol (FPRP) in detail. (08 Marks)
- 3 a. Brief out factors to be considered while making scheduling decisions. (04 Marks)
b. Explain the operation of Distributed Priority Scheduling (DPS) protocol. (06 Marks)
c. Discuss Multichannel MAC (MMAC) protocol in detail. (10 Marks)
- 4 a. Explain classification of routing protocols. (08 Marks)
b. List any 4 characteristics of an Ideal routing protocol for adhoc wireless networks. (04 Marks)
c. Explain route establishment and route maintenance in Adhoc On-Demand Distance Vector routing protocol (AODV). (08 Marks)

PART - B

- 5 a. Explain Core Extraction Distributed Adhoc Routing (CEDAR) protocol by mentioning its advantages and disadvantages. (10 Marks)
b. Explain the operation of Fisheye State Routing Protocol (FSRP). (10 Marks)
- 6 a. Explain any five issues in designing transport layer protocols for adhoc wireless network. (10 Marks)
b. With a neat diagram, explain the operation of Adhoc-TCP (ATCP) protocol along with advantages and disadvantages. (10 Marks)
- 7 a. Briefly discuss any 5 network layer attacks. (10 Marks)
b. Discuss any 4 requirements of secure routing protocol for adhoc networks. (04 Marks)
c. Explain security aware adhoc routing protocol with diagram. (06 Marks)
- 8 a. Discuss any 2 design choices for providing QoS support in adhoc networks. (06 Marks)
b. List the QoS parameters in adhoc wireless networks. (04 Marks)
c. Explain the issues and challenges in providing QoS in Adhoc wireless networks. (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.