

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: (04 Marks)
 - i) Military
 - ii) Emergency operations.
- 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.