



USN

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10CS/IS841

Eighth Semester B.E. Degree Examination, Aug./Sept. 2020
Ad-hoc Networks

Time: 3 hrs.

Max. Marks: 100

Note: Answer FIVE full questions, selecting atleast TWO questions from each part.

PART - A

- 1 a. List and explain different applications of Ad-hoc wireless networks. (10 Marks)
b. Explain the issues that makes wireless sensor network a distinct category of Ad-hoc wireless networks. (10 Marks)
2 a. Explain collision avoidance time allocation protocol frame format with a diagram. (05 Marks)
b. What are the design goals to be met while designing a MAC protocol for Ad-hoc networks? (05 Marks)
c. Explain with example, a working principle of Five-Phase Reservation Protocol (FPRP). (10 Marks)
3 a. Explain the working principle of multi-channel MAC (MMAC) protocol. (08 Marks)
b. Explain MAC protocol using directional antennas. (06 Marks)
c. Explain the operation of distributed priority scheduling (DPS) protocol. (06 Marks)
4 a. With an example, explain the process of route establishment in wireless routing protocol along with its advantages and disadvantages. (10 Marks)
b. Write the classification of routing protocol in detail. (10 Marks)

PART - B

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- 5 a. Explain the operation of Fisheye state routing protocol (FSRP). (10 Marks)
b. What are the advantages and disadvantages of CEDAR protocol? (03 Marks)
c. Explain zone routing protocol. (07 Marks)
6 a. Why does TCP not perform well in Ad-hoc wireless networks? (10 Marks)
b. Explain Ad-hoc TCP with state diagram for ATCP sender. (10 Marks)
7 a. Discuss the requirements and challenges in security provisioning for Ad-hoc wireless networks. (10 Marks)
b. Give the classification of security attacks on Ad-hoc wireless networks. (04 Marks)
c. List and give brief explanation of network layer attacks. (06 Marks)
8 a. Discuss the working principle of Ticket - based QoS routing protocol. (10 Marks)
b. Explain the issues in providing QoS in Ad-hoc wireless network. (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.

