USN | | | | | | | | | |                                    10CS/IS841

# Eighth Semester B.E. Degree Examination, June/July 2019
## 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. Bringout the differences between cellular networks and adhoc wireless networks. **(06 Marks)**
   b. Explain the following with respect to issues in adhoc wireless networks: i) routing ii) security. **(08 Marks)**
   c. Explain the major issues for a successful adhoc wireless internet with a neat diagram. **(06 Marks)**

2  a. Explain DPRMA protocol with respect to MAC along with its frame structure. Also mention its advantages and disadvantages. **(06 Marks)**
   b. List the important goals to be met while designing a MAC protocol for adhoc wireless networks. **(06 Marks)**
   c. Explain the five phase reservation protocol with its phases and frame structure. **(08 Marks)**

3  a. Describe piggy backing and scheduling table update mechanism in distributed priority scheduling with respect to MAC protocols. **(10 Marks)**
   b. Bring out the channel classification and selection operation in the MMAC protocol. **(10 Marks)**

4  a. List out the characteristics of an ideal routing protocol for an adhoc wireless networks. **(06 Marks)**
   b. Mention the classification of routing protocols in adhoc networks. **(06 Marks)**
   c. Explain the route establishment in AODV routing protocol with its advantages and disadvantages. **(08 Marks)**

## PART – B

5  Write a short note for the following with respect to routing protocols:
   a. Zone routing protocol **(06 Marks)**
   b. Fisheye state routing protocol **(06 Marks)**
   c. Optimized link state routing. **(08 Marks)**

6  a. Discuss the issues in designing a transport layer protocol for adhoc wireless networks along with classification of transport layer solutions. **(10 Marks)**
   b. Describe the major reasons behind through put degradation that TCP faces when used in adhoc wireless networks. **(10 Marks)**

7  Write short note for the following with respect to security in adhoc wireless networks.
   a. Security-aware AODV protocol. **(10 Marks)**
   b. Key management in adhoc wireless networks. **(10 Marks)**

8  a. Describe the issues and challenges in providing QOS in adhoc wireless networks. **(10 Marks)**
   b. Explain ticket based QOS routing protocol with an example. Mention its advantages and disadvantages. **(10 Marks)**

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