Important Instructions:

1) **Open this MS-Word document and start writing answers below each respective question given on page 2.**
2) **Answers the question in the same sequence in which they appear.**
3) **Provide to the point and concrete answers.**
4) **First read the questions and understand what is required of you before writing the answer.**
5) **Attempt the paper yourself and do not copy from your friends or the Internet. Students with exactly similar answers or copy paste from the Internet will not get any marks for their assignment.**
6) **You can contact me for help if you have any doubt in the above instructions or the assignment questions.**
7) **All questions must be attempted.**
8) **Do not forget to write your name, university ID, class and section information.**
9) **Rename you answer file with your university ID# before uploading to SIC.**
10) **When you are finished with writing your answers and are ready to submit your answer, convert it to PDF (no MS Word) and upload it to SIC unzipped, before the deadline mentioned on SIC.**
11) **Do not make any changes to the format provided.**
12) **Failure in following the above instructions might result in deduction of marks.**

Sessional Assignment, Course: - Mobile Computing

Deadline: - Mentioned on SIC **Marks: - 20**

Program: - BS (CS), BS-SE **Dated: 11 April 2020**

Related Course: Lecture 7 and 8.

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Class and Section: BSSE "B"

Q1: In what aspects is an Adhoc network different from infrastructure networks? (3)

Answer:

The Adhoc network is different from infrastructure networks on following aspects

1) **Adhoc wireless network have decentralized structure unlike infrastructure networks which have centralized structure.**
2) **The network is not dependent of preexisting infrastructure such as routers in wired networks**

Q2: What is the difference between reactive and proactive routing protocols in MANETS?

Answer:

Proactive routing:

1) **It is also called as table driven networks it works without requests or demand.**
2) **Maintains fresh lists of destinations and their routing behavior.**
3) **Periodically distributes the routing table through the network.**

Reactive routing:

1) **It is also called on demand routing works on demand by flooding the network with route request packets (RREQ).**

Q3: Differentiate between regular and MPR flooding? (2)

Answer:

Regular flooding:

Flooding in networks in used as concept of applying algorithms to develop a network for different environment . For example, Usenet , peer to peer sharing and as part of routing protocols.

Multi point relays (MPR):

It is an AODV routing protocols generally it is used to minimize the traffic in networks. used in the OLSR flooding protocols. MPR protocol provides higher efficiency in terms of routing overhead compared to AODV one of the most efficient routing protocols released for mobile ad-hoc networks.

Q4: On which path is the route reply message sent in DSR? (3)

Answer:
According to the DSR dynamic source route request is sent on path of RREQ (route request) which contains sender and target route and route reply is sent on RREP (route reply) protocols.

Q5: What is source routing?

Answer:

Source routing is the concept of addressing the path . when the sender sends the packet completely or partially it specifies the route for the delivery of packet.

Q6: If AODV does not store route information in the packet then how does the routing works? (4)

Answer:

1) **It does not store route in packets Instead, each forwarder remember reverse path to transmitter. Target replies with RREP travels along reverse path. Routes need not be included in packet headers**
2) **Nodes maintain routing tables containing entries only for routes that are in active use.**
3) **At most one next-hop per destination maintained at each node**

Q7. What are the functions of sequence numbers in AODV? (3)

Answer:

1) **Sequence numbers are used to avoid old/broken routes.**
2) **Sequence numbers prevent formation of routing loops.**