

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.

Student Name: Aamir Sohail

Student ID#:12509

Class and Section:9th A

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

Q2: What is the difference between reactive and proactive routing protocols in MANETS? (3)

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

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

Q5: What is source routing? (2)

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

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

Ans 1: Adhoc network different from infrastructure networks:

Infrastructure mode requires a central access point that all devices connect to. Ad-hoc mode is also known as “peer-to-peer” mode. Ad-hoc networks don't require a centralized access point. Instead, devices on the wireless network connect directly to each other.

Ans 2: Difference between reactive and proactive routing protocols in MANETS:

Proactive routing protocol is used for updating information in the network. Reactive protocol is determining the structure of networks. Hybrid routing protocol is combination of proactive and reactive protocols.

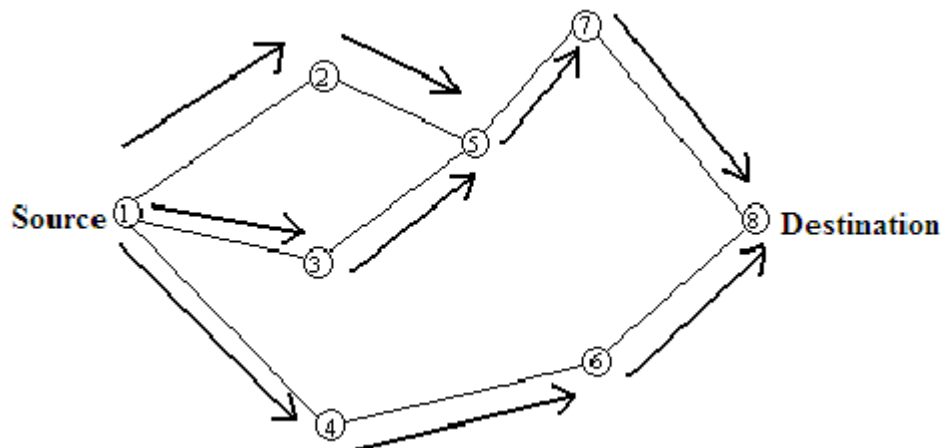
Ans 3:

Multipoint relay flooding

Multipoint relay flooding is a broadcast mechanism used in the ad hoc routing protocol OLSR. The principle is that each node has computed a multipoint relay set, and only these selected neighbors, will retransmit a packet broadcasted by the node. Obviously, the smaller this set is, the more efficient the mechanism will be (i.e., the greater the optimization).

Ans 4: **Route reply message sent path in DSR:**

Returns a Route Reply (RREP) message to the sender ○ Copies the accumulated route record from RREQ into RREP ○ Sender upon receiving RREP, caches the route in its route cache for subsequent routing.



Ans 5:

Source routing is a specific routing process where senders can specify the route that data packets take through a network. This allows for troubleshooting and various transmission goals. Source routing is an alternative to traditional routing where packets just move through a network based on their destination.

Source routing is also known as path addressing.

Ans 6:

AODV is a method of routing messages between mobile computers. It allows these mobile computers, or nodes, to pass messages through their neighbors to nodes with which they cannot directly communicate. AODV does this by discovering the routes along which messages can be passed. AODV makes sure these routes do not contain loops and tries to find the shortest route possible. AODV is also able to handle changes in routes and can create new routes if there is an error.

Ans 7:

AODV differs from other on-demand routing protocols in that it uses sequence numbers to determine an up-to-date path to a destination. Every entry in the routing table is associated with a sequence number. The sequence number acts as a route timestamp, ensuring freshness of the route.