

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(Section-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)

Answer no 1: The correspondence which makes both the networks different from each other. Ad-hoc is decentralized type of wireless network and it does not depend on pre-existing infrastructure. Infrastructure network comprise of nodes and access points.

Answer no 2: Proactive routing protocol is that in which each node of a network maintains a single or multiple routing tables, that are regularly updated. In proactive routing each and every node will send broadcast message to all other nodes in the network. It uses OSLR and DSDV.

Reactive routing is said to be on-demand it is the protocol in which the originator node initiates the route search process, and it needs to send data packets to target a node. It uses AODV and DSR.

Answer no 3: MPR flooding is said to be the set of neighbor nodes. Multipoint relays minimize the flooding of broadcast packets in the network by reducing duplicates retransmission in the same region.

Regular flooding is that in which each node in the network repeats the packets first time it receives it. In regular flooding each node in the component connected to the source will receive the packet at least once.

Answer no 4: Route reply message sent and can be obtained by reversing the route which is appended to receive the route request.

Answer no 5: Source routing is said to be path addressing. In source routing a packet header carry a route, and can be represented as complete sequence of nodes between source destination pair. Source routing allows easier trouble shooting and enables a node to discover all the route possible to a host.

Answer no 6: Routes does not need to be included in packet header. In routing there is a node which consists of entries only for routes and are active in use. Sequence numbers are used to avoid broken routes and also to prevent the formation of routing loops. Unused routes expire even if topology does not change.

Answer no 7:

- **If the sequence number already registered and is greater than the packets, it means that existing route is more upto dated.**

Receiving a route request packet, an intermediate node compares its sequence number with the sequence number in the route request packet.