Sessional Assignment, Course: - Mobile Computing

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

Program: - BS (CS), BS-SE   **Dated: 15 May 2020**

Related Course: Lecture 7 and 8.

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Class and Section: BS-SE , Section A

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

Ans:
1. In infrastructure network devices are connected through a single access point, which, is called wireless router while in Adhoc network there is no need of centralized access point.
2. In infrastructure network devices cannot communicate directly with each other while in adhoc network devices can communicate directly with each other.
3. Adhoc network is temporary network while infrastructure network is permanent network.

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

Ans:
1. Proactive protocols have lower latency due to maintenance of routes while the reactive protocol may have higher latency .

2. Proactive protocols can results in much higher overhead due to frequent route updates while reactive protocols results in lower overhead since routers are maintained only on demand basis.

3. In proactive protocol the router is already known when a packet needs to be forwarded while in reactive protocol a route is determined only.

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

Ans: An MPR set for a node is the minimal set of its one hop neghbors, which covers all 2-hop neighbors of that node. In OLSR, flooding of control messages is minimized using MPRs. In a normal broadcast scenario, a node forwards a packet (data or control) to all its 1-hop neighbors.

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

Ans: To return the Route Reply, the destination node must have a route to the source node. If the route is in the Destination Node's route cache, the route would be used. Otherwise, the node will reverse the route based on the route record in the Route Request message header (this requires that all links are symmetric).

Q5: What is source routing? **(2)**

Ans: 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. There are two different types of source routing – loose and strict. In loose source routing, the packet has to pass through specific listed hops, but in strict source routing, the sender specifies every step on a hop-by-hop basis.

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

Ans: The role of route maintenance is to provide feedback to the sender in case a router or link has gone down, to allow the route to be modified or re-discovered. A route can stop working simply because one of the mobile nodes has moved. If a source node moves, then it must rediscover a new route.

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

Ans: Any node maintains its own sequence number—the value of the variable sn—and a routing table whose entries describe routes to other nodes. The value of sn increases over time. In AODV each routing table entry is equipped with a sequence number to constitute a measure approximating the relative freshness of the information held—a smaller number denotes older information.