**ASSIGNMENT**

**Course: Mobile Computing**

**Program: - BS (CS), BS-SE**

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**Q1: In what aspects is an Ad-hoc network different from infrastructure networks?**

**Answer:** Connectivity that separates the two networks from each other. Ad-hoc is also known as peer-to-peer mode, which is a decentralized type of wireless network, a network is Ad-hoc because it does not depend on pre-existing infrastructure and infrastructure requires basic access point.

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

**Answer:**

|  |  |
| --- | --- |
| **Proactive** | **Reactive** |
| Route from each node to every other node in the network | Routes from Source to Destination only |
| Routes are ready to use instantaneously | Routes constructed when needed, higher connection setup delay |
| Periodic route-update packets | Route update when necessary |
| Large routing tables | Small or No routing tables |

**Q3: Differentiate between regular and MPR flooding?**

**Answer:**

|  |  |
| --- | --- |
| **Regular Flooding** | **MPR Flooding** |
| Regular flooding can be as simple as: when a packet must be flooded, each node in the network repeats the packet first time it receives it. Starting from the source of the packet, each node in the component connected to the source will receive the packet at least once (but typically multiple times). | Multi Point Relays is a set of selected neighbor nodes.  It minimizes the flooding of broadcast packets in the network by reducing duplicate retransmission in the same region. |

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

**Answer:** Route reply message is sent on a route obtained by reversing the route appended to receive route request.

**Q5: What is source routing?**

**Answer**: Source routing is also known as path addressing. Packet header contains a route, which is represented as a complete sequence of nodes between a source-destination pair. It is a specific routing process where sender can specify the route that data packets take through a network. Intermediate nodes use the source route included in a packet to determine the neighbor to send the packet.

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

**Answer:** Routes does not need to be included in packet header. Node maintain routing tables containing entries only for routes the are active in use. Sequence numbers are used to avoid broken routes and prevent formation of routing loops. Unused routes expire even if topology does not change.

**Q7: What are the functions of sequence numbers in AODV?**

**Answer**: The functions of sequence numbers in AODV are:-

• Every entry in the routing table is associated with a sequence number.

• The sequence number act as a route timestamp and ensures the freshness of the route.

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

• If the sequence number already registered is greater than that in the packet, the existing route is more up to dated.