**Worksheet 14**

1. Name four different types of ICMP messages.

Type Code Description

0 0 echo reply (ping)

3 0 dest. network unreachable

4 0 source quench (congestion control - not used)

8 0 echo request (ping)

2. What two types of ICMP messages are received at the sending host executing the *Traceroute* program?

1. ICMP warning message - TTL Expired (type 11 code 0)
   1. When datagram in nth set arrives to nth router
2. destination port unreachable ICMP message (type 3 code 3)
   1. After UDP segment arrives at destination host, 3-3 is sent and the source stops.

3. What are the purpose of the SNP *GetRequest* and *SetRequest* message?

* GetRequest() : manager-to-agent: “get me data” (data instance, next data in list, block of data)
  + The SNMP GET operation is used by the SNMP manager applications to retrieve one or more values from the managed objects maintained by the SNMP agent.
* SetRequest() : manager-to-agent: set MIB value
  + used by the management applications and applets to modify the value of the managed object

4. What is the purpose of the SNMP trap message?

Agent-to-manager: inform manager of exceptional event

The objective of this message is to allow the remote devices to alert the manager in case an important event happens.

All type/code of ICMP from lecture 11/15/2022

Type Code description

0 0 echo reply (ping)

3 0 dest. network unreachable

3 1 dest host unreachable

3 2 dest protocol unreachable

3 3 dest port unreachable

3 6 dest network unknown

3 7 dest host unknown

4 0 source quench (congestion control - not used)

8 0 echo request (ping)

9 0 route advertisement

10 0 router discovery

11 0 TTL expired

12 0 bad IP header