CPSC 3600

Spring 2021

Exam 2 (Extra Credit)

Anthony Jones

Q1 **Circle all lines that are true of DNS**

1. A TCP/IP network provides DNS name servers whose job is to resolve queries from

client applications.

2. A client query might ask a name server to resolve a domain name such as

koala4.cs.clemson.edu to an IP address such as 130.127.48.105

3. If a client issues a query to resolve the name www.mit.edu the client must be configured

with the IP address of MIT’s DNS name server.

4. A client located on Clemson campus issues a query to Clemson’s campus name server to

resolve the name www.ibm.com. The answer that is returned is marked as authoritative.

This means that the answer has come from a trusted name server such as Clemson’s name

server.

5. Our UDPEcho client program engages the DNS system by calling the sockets library

routine inet\_addr().

6. Our UDPEcho client program engages the DNS system by calling the sockets library

routine gethostbyname().

Q2 **A host has an ethernet interface with the following mac address:**

**ether a8:60:b6:01:e3:a3**

**Use the EUI-64 method to create an auto-configured IPV6 link local address.**

Split the address

a8:60:b6 01:e3:a3

Add FF:FE into the middle

a8:60:b6:ff:fe:01:e3:a3

Convert to proper colon delimiter

a860:b6ff:fe01:e3a3

Convert first eight bits to binary

a8 = 10101000

Flip the 7th bit (The unique ID)

a8 = 10101000

flip(a8) = 10101010 = aa

Final EUI-64 host ID

aa60:b6ff:fe01:e3a3

Q3

I read through this question and looked at the programming code, but I could not really understand what I was supposed to do for this problem. The code was also a little confusing to me, I will ask you about it during office hours next week.