# C2-3

What Media Access method does Appletalk use?

|  |  |  |
| --- | --- | --- |
|  |  | CS/MACD |
| Correct Response |  | CS/MACA |
|  |  | Token Passing |
|  |  | Demand Priority |
| [[https://cobra.parkland.edu/d2l/img/0/Shared.Main.actHide.png?v=10.7.9.9606-150](javascript://)Hide Feedback](javascript://) | | |
|  | |  |
| CS/MACA Collision Sense Multiple Access Collision Avoidance. Appletalk NIC's listen to the media, send a RTS (request to send) packet, then begin sending their packets. | | |

<http://zaielacademic.net/networking/media_access_methods.htm>

When you set the machines up in class, you were able to run the command:  
ping [NetBIOS\_name]  
But you couldn't run the command:  
ping [FQDN]  
Why?

|  |  |  |
| --- | --- | --- |
|  |  | NetBIOS names are always reachable across a network |
| Correct Response |  | the ping command was able to use NetBIOS for name resolution and we had no DNS server |
|  |  | You are wrong the only thing that worked was ping 10.10.1.4 until we made a hosts file |
|  |  | Name resolution only works when we have TCP/IP loaded |
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|  | | |  |
| the ping command was able to use NetBIOS for name resolution and we had no DNS server (or hosts file) A DNS (Domain Name Server) or a hosts file provides  IP address<->FQDN Name resolution.  On windows machines with properly configured NetBIOS names, NetBIOS also provides name resolution for IP,(or at least some IP utilities) | | | |

You are the Administrator of a TCP/IP Network. What happens if you set the IP address of one system to exactly the same as another system?

|  |  |  |
| --- | --- | --- |
|  |  | both machines network functionality is disabled |
|  |  | neither machines functionality is disabled |
| Correct Response |  | It used to be that both machines get an error message and one is disabled, depending on OS but now -depending upon which Ethernet drivers are in use- both machines MAY be able to work to some degree. |
|  |  | both machines get an error message and keep working. |

ISDN (Integrated Services Digital Network)is an implementation of what IEEE Network Standard?

|  |  |  |
| --- | --- | --- |
| Incorrect Response |  | 802.3 |
|  |  | 802.5 |
| Correct Answer |  | 802.9 |
|  |  | 802.7 |
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|  | |  |
| 802.9 is the IEEE specification for ISDN. | | |

Explain the 3-4-5 rule in Ethernet.  
  
An Ethernet network may have \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

|  |  |  |
| --- | --- | --- |
|  |  | no more than 3 hubs or repeaters, 4 populated segments, 5 total hosts |
| Correct Response |  | no more than 3 populated segments, 4 hubs or repeaters, 5 total segments |
|  |  | no more than 3 hosts, 4 hubs or repeaters, 5 total segments |
|  |  | none of the above |

What is the significance of 127.0.0.1?

|  |  |  |
| --- | --- | --- |
| Incorrect Response |  | It is the loopback or localhost IP address that all Windows OS'es have |
|  |  | It is the IP address of all hosts default router or connection to the internet |
| Correct Answer |  | It is the localhost IP address that all NIC's with an IP stack have |
|  |  | none of the above |
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|  | |  |
| It is the loopback or localhost IP address that all NIC's with an IP stack have | | |

What is FDM (Frequency Division Multiplexing)?

|  |  |  |
| --- | --- | --- |
| Correct Response |  | Analog Broadband like cable TV IEEE802.7 |
|  |  | Analog Baseband like cable TV IEEE802.11 |
|  |  | Digital Broadband like cable TV IEEE802.3 |
|  |  | I have no idea, but I am still a good person |

Which layer of the OSI Model is the layer that communicates with another host on the network?

|  |  |  |
| --- | --- | --- |
|  |  | NIC |
| Incorrect Response |  | Network |
| Correct Answer |  | Physical |
|  |  | Data-Link |
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|  | |  |
| Physical, the physical layer is the only layer that can communicate with another machine | | |
|  | | |

http://www.learncisco.net/courses/icnd-1/building-a-network/host-to-host-communications.html

Which OSI Model Layer transfers electrical signals over the media?

|  |  |  |
| --- | --- | --- |
| Correct Response |  | Physical |
|  |  | Data Link |
|  |  | Network |
|  |  | Topology |
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|  | |  |
| The physical layer is the only layer that transfers data. | | |

Token Ring's media access is often called \_\_\_\_\_\_\_\_\_,  
because access to the media is strictly controlled.

|  |  |  |
| --- | --- | --- |
|  |  | open-ended |
|  |  | closed to non-ring members |
| Correct Response |  | deterministic |
|  |  | 100Mbps |

What is the difference between an analog amplifier and a digital repeater?

|  |  |  |
| --- | --- | --- |
|  |  | an amplifier is much faster (less latency) |
|  |  | an amplifier amplifies the signal perfectly |
| Correct Response |  | an amplifier amplifies noise and distortion |
|  |  | a hub or repeater is faster (less latency) |

How does a host on a token ring network gain access to the media?

|  |  |  |
| --- | --- | --- |
|  |  | Listens to the media then sends a token if it wants to transmit |
| Correct Response |  | waits for the token then transmits once in possession of the token |
|  |  | asks the beaconing computer for access to the media |
|  |  | generates a token which will race around the ring telling other hosts to wait |

NDIS is the Network Driver Interface Specification. What does NDIS specify?

|  |  |  |
| --- | --- | --- |
| Correct Response |  | It is a NIC-Driver protocol specifying allowance of multiple protocol stacks simultaneously |
|  |  | It is a Data-Link protocol specifying allowance of only one protocol stack at a time |
|  |  | It is a specification telling where the ARP request should be routed |
|  |  | none of the above |

OSL Model

There are 2 layers of the OSI model where that layer chooses to send data one way or the other. Choose 2 of the following.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Correct Response | |  | Application |
| Correct Answer | Incorrect Response | |  | Presentation |
|  | Correct Response | |  | Session |
|  | Incorrect Response | |  | Transport |
| Correct Answer | Incorrect Response | |  | Network |
|  | Incorrect Response | |  | Data Link |
|  | Correct Response | |  | Physical |
| [[https://cobra.parkland.edu/d2l/img/0/Shared.Main.actHide.png?v=10.7.9.9606-150](javascript://)Hide Feedback](javascript://) | | | | | |
|  | |  | | | |
| The Network layer makes routing decisions based upon IP addresses, and the Presentation layer makes decisions at the redirector.  An ARP request maps \_\_\_\_\_\_\_\_ to \_\_\_\_\_\_\_\_.   |  |  |  |  | | --- | --- | --- | --- | |  |  | | layer 3 to layer 6 | |  |  | | Network Layer to Layer 4 transport | | Correct Response |  | | Layer 3 to Layer 2 | |  |  | | layer 1 to layer 3 | | [[https://cobra.parkland.edu/d2l/img/0/Shared.Main.actHide.png?v=10.7.9.9606-150](javascript://)Hide Feedback](javascript://) | | | | | |  | |  | | | | IP address to a MAC address  or layer 2 to layer 3  Correct ARP maps an IP to a MAC | | | | | | | | | | |

ame Resolution matches a computers' name which is layer \_\_\_ to it's \_\_\_\_\_\_\_\_\_\_ which is layer \_\_\_ :

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | | Layer 6 : IP address : Layer 3 |
| Correct Response |  | | Layer 7 : IP address : Layer 3 |
|  |  | | Layer 6 : MAC address : Layer 2 |
|  |  | | Layer 5 : IP address : Layer 3 |
| [[https://cobra.parkland.edu/d2l/img/0/Shared.Main.actHide.png?v=10.7.9.9606-150](javascript://)Hide Feedback](javascript://) | | | | |
|  | |  | | |
| Layer 7 : IP address : Layer 3 | | | | |

You are the Administrator of a TCP/IP Network. What happens when a machine is booted on to that network?

|  |  |  |
| --- | --- | --- |
|  |  | The machine comes up and makes an ARP request to see if it's MAC is already on use on the network |
|  |  | The machine comes on and uses the RARP protocol request at Layer 2 to see if another machine is using that MAC. |
| Correct Response |  | The machine comes on and uses the RARP protocol request at Layer 3 to see if another machine is using that IP address. |
|  |  | The machine comes on and uses the RARP protocol request at Layer 2 to see if another machine is using that IP address. |

# C6-7-8

A host with a TCP/IP stack loaded and configured may have ports (BSD-Style Sockets) ranging from 0 to \_\_\_ .

\_\_\_1024\_\_\_Incorrect Response**(65535, 65,535)**

Suppose you do not have any name server for resolution on your network so you have to refer to machines by IP address when you want to connect to them. What file can you edit to give yourself some IP<->name matches?  
  
Please enter only 1 word, not including the path.

\_\_\_arp\_\_\_Incorrect Response**(hosts, lmhosts)**

Are the source port and the destination port the same? In other words, HTTP is usually a port 80 protocol but does the packet from your browser that is making a web request also originate from port 80 on your client?  
  
Answer yes or no

\_\_\_yes\_\_\_Incorrect Response**(no)**

|  |  |
| --- | --- |
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|  |  |
| No Your local system generates requests on a port of it's choosing, and then when the Web Server answers back it answers back to the source port of the requesting browser, which is now listeninig on that port for a TCP connection from the server. | |

What are the 2 main versions of TCP currently in use today?  
Enter 2 numbers like:  
3 7

\_\_\_\_\_\_\_\_Incorrect Response**(4 6, 6 4)**

A Class \_ network can have a first octet between 192 and 233 like 192.243.12.232. There are a possibility of 2,097,152 networks with up to 254 hosts each.

\_\_\_A\_\_\_Incorrect Response**(C)**

Protocol Division Multiplexing was provided by what Ethernet driver standard by 3Com and Microsoft?  
  
Please just enter the acronym like: UUIL

\_\_\_\_\_\_\_\_Incorrect Response**(NDIS, Network Driver Interface Specification)**

IP is connectionless.

|  |  |  |
| --- | --- | --- |
| Correct Response |  | True |
|  |  | False |
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|  | | |  |
| True. IP is the Network and Name resolution component of TCP/IP. It has nothing to do with establishing and maintaining a connection, which is the job of TCP. | | | |

# Exercise 4

\_\_\_\_ is the name of the most popular DNS server on the network.

\_\_\_google\_\_\_Incorrect Response**(BIND)**

You are looking for a host on the network. It's IP address is 216.125.250.133 . You run the command: nslookup 216.125.250.133 and the DNS Server returns: chewybits.csc.parkland.eduYou then run the command:ping chewybits.csc.parkland.edu and the host does not reply.What is going on here?

|  |  |  |
| --- | --- | --- |
| Incorrect Response |  | Your DNS Server is down or broken |
|  |  | you cannot ever ping chewybits.csc.parkland.edu by name |
| Correct Answer |  | chewybits.csc.parkland.edu may be turned off |
|  |  | none of the above |

A host is on the network 128.15.211.0 , it's netmask is 255.255.255.192 .  
  
You run the command 'ipconfig /all' and see that it has the IP address of 128.15.211.60 .  
  
What is it't broadcast address?

|  |  |  |
| --- | --- | --- |
|  |  | 255.255.255.192 |
|  |  | 255.255.255.63 |
| Correct Response |  | 128.15.211.63 |
|  |  | 128.15.211.255 |
| [[https://cobra.parkland.edu/d2l/img/0/Shared.Main.actHide.png?v=10.7.10.10018-150](javascript://)Hide Feedback](javascript://) | | |
|  | |  |
| 128.15.211.63 | | |

If a host with the IP address of 216.125.250.11 was on a subnet and that hosts broadcast address was 216.125.250.31 . What would that hosts subnet mask be?  
  
Enter the complete subnet mask.

\_\_\_\_\_\_\_\_Incorrect Response**(255.255.255.224)**

|  |  |
| --- | --- |
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|  |  |
| 255.255.255.224 | |

If you wanted to find out if a host was registered in the DNS server's database and you knew that the host had an IP address of 216.125.31.250 , you would go to a host that was configured to use a DNS server and type the following command line:  
\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_ping 216.125.31.250\_\_\_Incorrect Response**(nslookup 216.125.31.250, dig 216.125.31.250, host 216.125.31.250)**

|  |
| --- |
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Hosts on the network with a TCP stack loaded have the possibility of 0-65535 ports in both TCP and UDP.

|  |  |  |
| --- | --- | --- |
| Correct Answer |  | True |
| Incorrect Response |  | False |

In a class C network with a netmask of 255.255.255.128 a host with the IP address of 10.10.2.13 would send a broadcast packet to what IP address?

\_\_\_10.10.2.127\_\_\_Correct Response

You would edit the \_\_\_\_\_\_\_\_\_\_\_\_\_ file if you did not have a DNS Server. Your answer should be a complete path and file name.

\_\_\_C:\Windows\System32\drivers\etc\hosts\_\_\_Incorrect Response**(\windows\hosts)**

|  |  |
| --- | --- |
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|  |  |
| c:\windows\hosts | |

A host with the following TCP/IP configuration is on the network defined by what IP address? Please enter in the IP address of the Network Definition only.  
216.125.250.76 IP  
255.255.255.192 Netmask

\_\_\_216.125.250.64\_\_

# C17

You would type the command \_\_\_\_\_\_\_\_\_ \_\_ to see all TCP and UDP connections to your machine.

\_\_\_ipconfig /all\_\_\_Incorrect Response**(netstat -a)**

You use the following command to see if a machine is running a mail server.

|  |  |  |
| --- | --- | --- |
|  |  | telnet host 23 |
|  |  | ping host /mail |
| Correct Answer |  | telnet host 25 |
| Incorrect Response |  | ping host 25 |

[**https://kb.acronis.com/content/7503**](https://kb.acronis.com/content/7503)

You use the following command to see if a machine is running a mail server.

|  |  |  |
| --- | --- | --- |
|  |  | telnet host 23 |
|  |  | ping host /mail |
| Correct Answer |  | telnet host 25 |
| Incorrect Response |  | ping host 25 |
| [[https://cobra.parkland.edu/d2l/img/0/Shared.Main.actHide.png?v=10.7.10.10022-150](javascript://)Hide Feedback](javascript://) | | |
|  | |  |
| telnet host 25  will connect to host on port 25 | | |

You use ping to test a host for open ports

|  |  |  |
| --- | --- | --- |
|  |  | True |
| Correct Response |  | False |
| [[https://cobra.parkland.edu/d2l/img/0/Shared.Main.actHide.png?v=10.7.10.10022-150](javascript://)Hide Feedback](javascript://) | | |
|  | |  |
| False. ping is used to see if a host is up, we use telnet to see if a host is listening on a certain port. | | |

You would run the \_\_\_\_\_\_\_\_ daemon if you wanted to always monitor your network's arp tables so you know which machines are coming on and off your net.

\_\_\_netstat\_\_\_Incorrect Response**(arpwatch)**

You want to know if the machine server1.parkland.edu is running a mail server. Give the telnet command that you would use to test if the mail port is open.

\_\_\_ping server1.parkland.edu 25\_\_\_Incorrect Response**(telnet server1.parkland.edu 25)**

|  |  |
| --- | --- |
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|  |  |
| telnet server1.parkland.edu 25 | |

Which utility can tell you if there is an overloaded router?

|  |  |  |
| --- | --- | --- |
| Correct Response |  | tracert |
|  |  | ping |
|  |  | telnet |
|  |  | netstat |
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|  | |  |
| tracert will tell you the time skews that it took for a router to handle a packet. | | |

A host can be configured to look to more than one DNS Server.

|  |  |  |
| --- | --- | --- |
| Correct Response |  | True |
|  |  | False |
| [[https://cobra.parkland.edu/d2l/img/0/Shared.Main.actHide.png?v=10.7.10.10022-150](javascript://)Hide Feedback](javascript://) | | |
|  | |  |
| The DNS Servers are called  Primary  Secondary  Tertiary  And the secondary or tertiary ones are used if the primary (or primary and secondary) DNS Servers are down. | | |

Which command will show you which ports the machine that you are currently at the console of is listening on?

|  |  |  |
| --- | --- | --- |
|  |  | winipcfg or ipconfig /all |
| Incorrect Response |  | netstat |
| Correct Answer |  | netstat /a |
|  |  | nbtstat |

You use this utility to see what your current default gateway or router's IP address is.

\_\_\_ipconfig /all\_\_\_Correct Response

|  |  |
| --- | --- |
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|  |  |
| Any of the following should work: ipconfig ipconfig /all winipcfg netstat -r | |

If you wanted to see the NetBIOS statistics for the server surt, you would type \_\_\_\_\_\_\_\_\_\_\_ \_\_ \_\_\_\_

\_\_\_nbtstat\_\_\_Incorrect Response**(nbtstat -s surt)**

You have a host that you are going to set up on the network, you know that the IP is supposed to be 216.125.253.11 . What command do you run on a machine that is connected to a DNS server in order to find it's name? Be complete.

\_\_\_nslookup 216.125.253.11\_