

## **MISCELLANEOUS**

What is rule # 34?  
List 3 Anti-Virus programs.

## **BIAS, POLLS, AND SEARCHING**

Who is the easiest person in the world to fool?  
Explain the relationship between correlation and causality  
What are confirmation and hindsight bias?  
Also, provide a simple example of a hindsight bias.  
What does pareidolia mean?  
What is the difference between System 1 and System 2?  
What are Haidt's five axes of bias?  
How can you trust your search results?  
How does an individual know to trust a website?  
For the most part, why are online polls unreliable?  
How useful and accurate is an internet poll?  
Are internet polls valid sources of information?  
What does to "Pharyngulate a poll" mean?  
Why isn't it a good idea to have a survey with one "yes" answer and two "no" answers?  
What are some ways you know you can trust a website?  
Name several search engines other than Google.  
Name some examples of search techniques.

## **EMAIL**

How private is e-mail as a form of communication?  
Are emails more like letters or more like postcards? Why?  
What does the term "phishing" mean?  
What is a phishing scam?  
How do you identify phishing?  
How can you prevent yourself from falling for a scam email or phishing scam?  
How do you know if an email or letter is a scam?  
Will a reputable site directly ask for personal info?  
What percentage of email sent today is spam?  
What is a Nigerian scam letter?  
Why is there so much spam in email?  
Should your mom send your social security number via email? Why or why not?  
Why is email-based phishing and spam so prevalent?  
Where does term for email "spam" derive from?  
Is spam mail costly to generate?  
What types of email attachments can contain malware? What types are universally safe?  
What are some ways an individual can tell if they have received a spam email?  
What is a macro and what are the repercussions?  
Back in the 1990s, what was a danger with macros and Email attachments?

## **THE INTERNET**

What was the ARPANET?  
What was the initial point behind connecting many computers in a network?  
What year did the "Web" come about?  
When was Amazon.com founded?  
Who is the man credited with the invention of the Web?  
Traditionally, what are the top 6 level domains?

## **BITS, BYTES, AND BASES**

What is a bit?  
What is a byte?  
How many bits are in each Byte?  
How many unique patterns are there in each Byte?  
How many patterns are there for N bits, where N is an arbitrary integer?  
What is the minimum byte value and what is this value equivalent to in base 10?  
What is the maximum byte value, and what is its equivalent value in base 10?  
How can you convert numbers in decimal to binary?  
How can you convert numbers in binary to decimal?

## **NETWORKS AND ROUTING**

What is "sneakernet"?  
What is a serial-port network?  
What is a "point-to-point" network?  
What is the major flaw of a network connected via serial port?  
What are the advantages and disadvantages of a fully connected point-to-point network?  
What is the formula for the amount of links a fully-connected computer network uses?  
What is a star network?  
How does the star network work?  
What are some of the constraints and disadvantages of the star network?  
Describe a token ring network.  
What is the benefit of having a token ring network?  
How is a message sent through a token ring network?  
What is the problem in token ring network types?  
What is Ethernet?  
Explain how Ethernet network works, and how it can fail.  
What is one problem of Ethernet?  
How many wires are in an Ethernet cable?  
What is the RJ45 plug type?  
What is the current category of Ethernet cable most in use today?  
What is the down side to Ethernet?  
What are packet collisions?  
How do Ethernet systems deal with packet collisions?  
What is an IP (Internet Protocol) Address?

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*Professor William T. Verts*

In a general sense, what can we think of an IP address as?  
What is the function of an IP Address?  
What is the difference between IPv4 and IPv6?  
How many slots of numbers are in an IPv4 address?  
How many slots of numbers are in an IPv6 address?  
How many bits are in an IPv4 address?  
How many bits are in an IPv6 address?  
How many unique addresses can be exist on IPv4?  
What numbers do UMass IP addresses begin with?  
What manages multiple local IP addresses and moderates traffic?  
What is the solution to the IPv4 exhaustion and how will it fix the problem?  
Why people are not using IPv6 to replace IPv4 even though it has been out for a long time?  
How did home routers help extend the life of IPv4?  
What is the classful system and what are the 3 (main) classes within it?  
Under classful addressing, what class is never used?  
What is the binary format of each class?  
What class in the classful addressing routing technique would UMASS use?  
In an IPv4 address such as 147.129.234.102, what is the class, what are network & machine IDs?  
What would be the most efficient classful addressing style to use for a large corporation?  
What was the problem with the classful system?  
How does Classless Inter-Domain Routing (CIDR) fix the problems of classful addressing?  
In an IPv4 address such as 147.129.234.102/12, what are the network and machine IDs?  
What is the difference between a hub, a switch, and a router?  
What's the difference between a house with 9 computers connected to a hub versus 9 computers connected to a router?  
Explain why a router can be better than a hub when connecting many computers to the Net.  
What is the benefit of using a router?  
What's the function of a router? How does it help with the lack of IP addresses problem?  
What are the differences between the various 802.11 wireless specifications?  
Are they all compatible with one another?  
Can an 802.11g router talk to a computer running an 802.11b Ethernet card?  
How many megabit/second does 802.11b capable of?  
What are the printing options when setting up a home network?  
What is DNS?  
What does DNS stand for?  
Explain DNS and what its main functions are.  
What is a root server with respect to DNS?  
What are the advantages and disadvantages of cache with respect to DNS?  
What is a DNS cache?  
What happens if a site becomes a victim of cache poisoning?  
How can you avoid a cache poisoning situation?  
What does the acronym TTL mean?  
Why it is important for cached IPs to have TTL?

## **THE WEB**

Who first proposed the framework for the World Wide Web and when was this done?

What was the first graphical browser and when was it created?

What do http and HTML stand for?

What does URL stand for?

Describe the components of a URL.

In a URL the "http://" represents what?

How does a search engine such as Google find websites?

What is the purpose of a Web crawler or Web spider?

Can a Web crawler find all pages on the Web? Why or why not?

Will an IP address work in place of a host address in a URL?

List several protocols that can be used in a URL.

## **BROWSERS**

What are cookies?

Why do websites use cookies?

What are the advantages and disadvantages of cookies?

What are the three security options that the computer will allow you to use with cookies?

Can cookies be malicious?

Can you get a virus from a cookie?

How often does Dr. Bill clean up his cookies?

What is an example of a website that uses cookie and what does it use them for?

What is a browser cache? (Distinct from a DNS cache.)