**Computer Applications**

The Internet – Review 03

1. How is digital information different than analog information?
Give an example of a device that uses each.

Digital uses numbers to store the ‘information’ (sound, video, text, etc.) DVD, CD, Internet
Analog doesn’t use numbers! Tape Recorder, AM radio, …
2. When data is sent over the Internet, it is sent in binary. What is binary?
0’s and 1’s are easy to send.
Also, if the signal drops or weakens, you still know whether or not it is a 0 or 1.
3. Why is binary so good to use for computers and communication?
Computers use electric charge. Charge is 1, no charge is 0. Simple for transistors!
4. Show you know how binary works. What would the number 13 be in binary?
Hint: the ‘slots’ follow the pattern 128 64 32 16 8 4 2 1

00001101 or 1101

What would the binary number 00100011 be in the regular decimal number system?

32 + 2 + 1 = 35
5. You are going to send a text message to someone. The letters in the text are sent as binary numbers.
How is this possible? What takes place? You should use the term ASCII CODE in your answer.

See notes.
6. Each letter is sent as a group of 8 ones and zeros. How do the terms *bit* and *byte* relate to this?

bit : one single 0 or 1

byte: 8 bits

If you have 1 MegaByte, you have \_\_\_\_\_1,000,000\_\_\_\_\_\_\_\_ bytes

If you have 1 GigaByte, you have \_\_\_1,000,000,000\_\_\_\_\_\_\_ bytes.

A typical DVD movie might contain \_\_\_\_4\_\_\_\_ Gigabytes. This is \_\_\_4,000,000,000\_\_\_\_ bytes.

When you download at home, you might get 1 MegaByte/second coming in. How many 0’s and 1’s are coming in per second? 8,000,000 zeros or ones
7. How is a picture sent as 0’s and 1’s ? Use the term pixels, red, green, and blue in your answer.

see notes
8. How is a music file sent as 0’s and 1’s ? Use the term amplitude in your answer.

see notes
9. “Sending a video is just sending thousands of pictures and sound”. Do you agree or disagree with this statement?

I agree!