

- 1) Give an example of a Code of Ethics for a computer professional?
- 2) Pick a form of copy protection and explain how it works
- 3) I have a video clip (no audio) that is:
 - 1200x300 pixels in dimension
 - 16 bit color
 - 30 frames a second
 - 20 seconds long
 - How many bytes does the video clip take up, uncompressed?
You should write the formula.
 - How many bits per second does the file need to play at?
You should write the formula.
- 4) You have an audio file that is:
 - 3 Minutes long
 - Stereo
 - 16 bit samples
 - 44.1kHz
 - How many bytes does this audio clip take up, uncompressed?
You should write the formula.
 - How many bits per second does the file need to play at?
You should write the formula.
- 5) What are keyframes used for in Animation?
- 6) What device uses CMYK and which device used RGB. And why do they use those based on the properties of light?
- 7) Pick 2 image formats and discuss their differences and reasons why you would use one instead of the other.

8) For MPEG video compression what do the following types of frames represent?

I-frames, P-frames, B-frames

9) What do sin waves have to do with compression?

10) What does Quantization do to values?

11) If you have an input signal of sound at 20kHz that you want to record, what is the minimum sample rate AND WHY?

12) What are some additional features of MPEG 4?

13) For JPEG, what happens at the DCT step?

14) Why does JPEG use a Zig Zag pattern for writing out the values in the block of data?

15) Can you give an example of a video application which would demand symmetric coding?

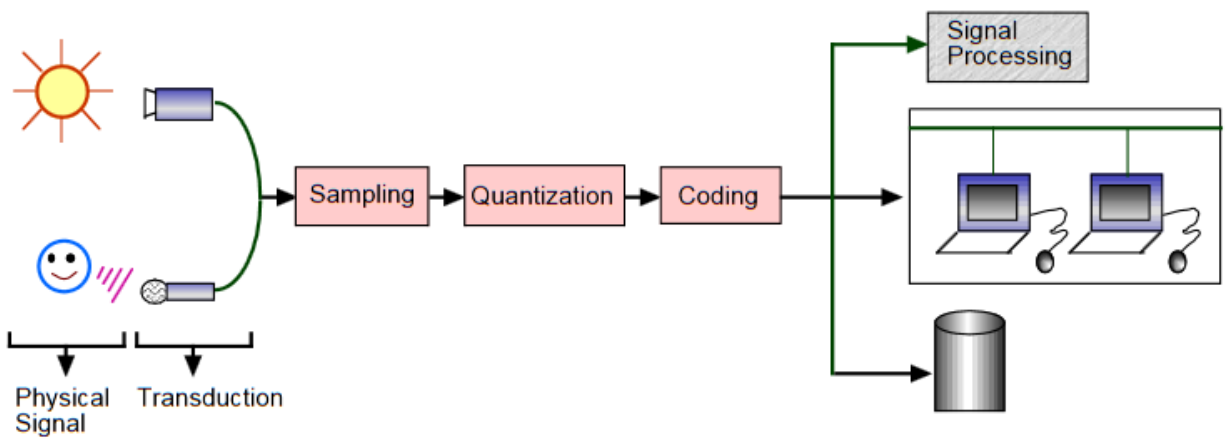
16) What does interleaving data on a CD help with and how does it accomplish this?

17) How does MP3 audio obtain a high level of compression?

18) How does a computer recognize the words that you speak?

19) The computer interface has changed over the years. Explain how it has changed and where is it going towards?

20) Please explain the diagram below of a **Generic Digital Multimedia System**



Gotten from page 164 of:

<http://www.sci.brooklyn.cuny.edu/~goetz/cisc3630/books/Signal%20Computing.pdf>