

DESN275 Final Quiz Study Guide Spring 2020

The Study questions from the weeks 8 and 9 will make up half of the final quiz. The second half of the final quiz will be taken from these review study questions.

Physics of Sound

Q: How does *perception* affect what we think we hear?

A: Frequency and compression seem like *loudness*.
Sounds can mask or hide each other.
Making something seem louder involves actually quite a bit of level increase. (hence dB)

Q: What is *pitch*? What is *loudness*?

Q: Are *loudness* and *amplitude / level* the same thing?

Q: What is the fundamental frequency range of a typical male voice (baritone)? *110-425 Hz* Of a typical female voice (contralto)? *200-700 Hz* Of a bass guitar or double bass? *40-200 Hz* Of a piano? *28-4100 Hz*

Q: What is the timbre of a sound?

Q: Why does it make sense to measure sound intensity in **decibels**, considering it is some logarithmic math thing that sounds kind of complicated?

Q: If you want sound 1 to seem to be twice as far away from the listener as sound 2, how much quieter should sound 1 be in dB?

Q: Explain the parts of a sound envelope: *attack, decay, sustain, release*.

Q: If you were preparing sound for a scene in a subway, basement, bedroom, log cabin, etc, would you mostly want to create the effect of reflection, scattering, or absorption?

Q: Explain why sound sources that are either in-phase or out of phase change the amplitude of the sound.

Q: What, in general, does the thickness of sound absorbing material have to do with the material's ability to absorb particular sound frequencies?

Recording

Q: What are three significant differences between a *dynamic* microphone and a *condenser* microphone?

Q: What is *phantom power*?

Q: What do these microphone directionality terms mean?
Omnidirectional Cardioid Figure 8

What is a useful advantage of each?

Q: What is the difference between *balanced* and *unbalanced* cables?

Q: Which one has 3 connectors?

Q: What is the definition of *frequency response* for microphones?

Q: What two devices does a preamp go between in all recording setups?

Q: Why would an instrument like an acoustic guitar or clarinet benefit from being recorded in stereo?

Q: If you hear clipping distortion in your recording, what are several things you can do to avoid the clipping when you re-record the section (there are 3 things)?

Q: What is the minimum acceptable signal-to-noise **ratio** we should *try* for?

Q: Why would you want to record a few minutes of "no dialog" while recording dialog in the field?

Editing

Q: Why are *zero-crossing points* important when editing?

Q: What is *normalizing*?

Q: What is a *transient* in a wave form?

Mixing

Q: What do "tall, deep, and wide" mean in a mix?

Q: What are the primary goals of EQing? (4?)

Q: What general range of frequencies represent the...

Bottom - kick drum -
Boom - warmth - bass -
Fullness - mud -
Honk - body - boxy -
Brightness - clarity -
Sibilance - "shh" , "esss" - Air -

Q: What is usually better with EQ, *cutting* or *boosting*, and why?

Q: What are *inserts* in a DAW mixer?

Q: Explain: what are *sends*?

Spatial Effects

Q: How can delay and reverb help you simulate room size and surface types?

Q: What does reverb do to an instrument or object sound's apparent *placement* in a stereo mix?

Q: *What are bus effects?*

Compression

Q: What is *dynamic range*?

Q: Be able to explain what a *compressor* does.

Q: Explain *threshold*. Explain *ratio*.

Q: Explain what a *limiter* does.

Q: *What are four good reasons to use compression?*

Sound Design

Q: What are the EQ characteristics of cinema "academy curve" soundtracks?

Q: Environmental sounds need to change to indicate a scene change from city to countryside, and from one country to another. What are two other types of scene changes that would suggest significant changes in **environment sound**?

Q: An **action sound**?

Q: An **object sound**?

Q: How do we use adjectives in a sound map?

As design hints

Q: What is *spotting*? What are *cues*?

Q: What are examples of emotional changes that would make sense in a sound map?

Q: What are examples of physical or dramatic transitions (plot beats)?

Q: What basic guidelines are good for the beginning sound designer to use?

Music

Q: What is meter?

Q: In the 12-half-steps between octaves, how many half-steps are there in the following *intervals*, and what do they typically signify emotionally?

flatted second

second?

flatted or minor third?

third or major third?

fourth?

fifth?

Octave?

Q: What would you do with a sound tool called **transpose**?

Q: What are some of the *guidelines* to help us support visual media with musical notes?

Q: How does music **resolve**? In a media project, what is an example of when would you want it to resolve?

Q: What does *quantize* mean?

Loop Questions

Q: What is a *loop*? What is the difference between a loop and a short recorded musical passage?

Q: What are the differences between a "software" instrument loop and "real" instrument loop?

Q: Which one can you transpose the *most*?

Which one lets you change individual notes?

Digital Sound Files

Q: What is the sample rate for film?