**Section 2 Study Questions (20.0 points)**

*Answer each question fully. Complete sentences are not necessary, but some questions may require more than one sentence to answer them fully.*

**Lesson 1 (4.0 points)**

1. In an analog audio recording, what sort of relationship does the sound wave have to its recorded form? (1.0 points)

 In an analog audio recording, there is a one to one relationship between a sound wave and its recorded form.

2. Who invented the first working phonograph? (0.5 points)

Thomas Edison

3. What is another name for a record player? (0.5 points)

Gramophone

4. How does recorded audio stay on an audio tape? (1.0 points)

With magnetism

5. What is one disadvantage of analog recording? (1.0 points)

It’s not as convenient to store as digital

**Lesson 2 (3.5 points)**

1. What is digital audio? (0.5 points)

Digital audio is analog audio that's been changed into data.

2. What is used to read the audio off of a compact disc? (0.5 points)

Laser scanners in the CD player

3. What is one advantage of hard-disk recording? (1.0 points)

Unlike cassette tapes, the hard drive can jump to any piece of information stored on it nearly instantly.

4. What does DAW stand for? (0.5 points)

Digital audio workstation

5. What is one advantage of digital recording? (1.0 points)

That copies of digital recordings are identical to the original.

**Lesson 3 (3.0 points)**

1. What is acoustics? (0.5 points)

Acoustics is the science and study of sound.

2. What is the control room? (0.5 points)

The control room is where the audio engineer controls and monitors how the sound from the studio is recorded.

3. What is a reference monitor? (0.5 points)

It’s a speaker that lets audio engineers hear the sound from the soundproofed recording room.

4. What's one important thing to consider when thinking about a studio's location? (1.0 points)

Whether outside noises are loud enough to leak in

5. What is a trap? (0.5 points)

Traps are temporary sound barriers made out of things like foam and fiberglass.

**Lesson 4 (3.0 points)**

1. What are acoustical problems? (1.0 points)

Acoustical problems are related to how sound behaves in inside spaces, and the unwanted sound and noise that creeps into recordings from electrical equipment, instruments, and human beings moving around.

2. What is an echo? (0.5 points)

An echo is a noise caused by a sound wave bouncing off of a surface, like a wall or a ceiling.

3. What is a flutter echo? (0.5 points)

A flutter echo is a special kind of echo caused by sound bouncing back and forth between two parallel walls.

4. What is decay? (0.5 points)

Decay is the process of a sound losing amplitude over time. When a sound completely decays, its sound waves stop, and it can't be heard anymore.

5. What does Audacity's Silence Generator do? (0.5 points)

In Audacity, the Silence Generator can add a specific amount of silence to an audio track.

**Lesson 5 (3.5 points)**

1. What is reverb? (1.0 points)

Reverb is the audio effect a sound makes as it bounces around a room until it completely dies out, or decays, into silence.

2. What is RT60? (1.0 points)

The amount of time for a sound's reverb to decay by 60 dB below the amplitude of the original sound.

3. What is GVerb? (0.5 points)

In Audacity, GVerb is a reverb effect generator.

4. Describe one way to reduce reverb in a room. (1.0 points)

Making sure the microphone is between 1 and 6 inches away from the instrument or person being recorded will limit reverb.

**Lesson 6 (3.0 points)**

1. What is leakage? (0.5 points)

Leakage is when unwanted sound gets into a recording

2. Describe one way to fix leakage. (1.0 points)

Record instruments separately

3. What is a standing wave caused by? (0.5 points)

A standing wave is caused by a sound wave reflecting back and forth between two parallel walls.

4. What is the noise floor caused by? (0.5 points)

The noise floor is caused by the ambient and mechanical sounds of electrically powered equipment in a building.

5. What is frequency balance? (0.5 points)

The frequency balance of an audio signal is the combination of all of the original frequencies that make up a sound.