Lesson 3

Introduction - Digital Audio Basics

STUDENT NAME: Sean Daly
STUDIO NAME: Trackstar
NAME OF MENTOR(S): Josquin des Prés
Phil Higgins

1. The _____sampling rate_____ is the number of measurements taken from an analog signal in one second. (in this lesson in this manual)

2. When we allow frequencies that are twice our sample rate to enter the sampling process, we get __alias frequencies__ or sounds that are actually harmonic distortion. (page 206)

3. __Quantization__ is the way Digital Audio Workstation (D.A.W.) records the volume component of the digital recording or sampling process. (page 203)

4. _____Dither_____ is applied to the process to reduce quantization errors and increase in noise and/or fuzziness that could creep into a bitstream to make it sound more natural. (Page 208-209)

5. List and explain in detail the Nyqist theorem. (page 205)

6. The basic theory of digital audio is processed, stored, and reproduced over time through the use of a ___binary System___. (page 199)

7. __MP3 MPEG__ is the most common type of compression format for e-mailing audio. (page 377-378)

8. When we rip a CD to MP3, we reduce the size __10__ percent. (page 26, Recording Connection Workbook)

In regards to sampling, the Nyqist Theorem states that in order for frequencies to be accurately transfered into the digital domain it must have twice the sample rate as the highest frequency as too avoid alias or harmonic distortion (frequencies that didn't exist originally)