

Sharma, Yashi

| Elective

| QuizStar

DC3

 Go BackYour score: **8 out of 10 (80%)**

Quiz Attempts: 1

Your Responses:

- 1.** the range of audible frequencies is [1 pts.]
- ☐ 20 hz to 22 hz
  - ☐ 20 Khz to 22 Khz
  - ☐ 20 Khz to 22000 hz
  - ☒ 20 hz to 22 Khz
- 2.** The problem with measuring amplitude is that the ear is sensitive to a very wide range of sound levels (amplitudes). It is inconvenient to deal with measurements in such a wide range, which is why the units of sound loudness use a ..... [1 pts.]
- ☐ exponential scale
  - ☐ logarithmic scale
  - ☐ quantized scale
  - ☒ frequency scale
- 3.** .....may work well when the sound contains long runs of identical samples. [1 pts.]
- ☒ RLE
  - ☐ Huffman
  - ☐ CLE
  - ☐ LZW
- 4.** The existence of .....suggests an approach to lossy audio compression. Just delete any audio samples that are below or above the cut off frequency. [1 pts.]
- ☐ frequency masking
  - ☐ temporal masking
  - ☒ hearing threshold
  - ☐ None of the above
- 5.** ..... occurs when a sound that we can normally hear (because it is loud enough) is masked by another sound with a nearby frequency. [1 pts.]
- ☒ frequency masking
  - ☐ temporal masking

- ☐ hearing threshold  
☐ None of the above
6. .... may occur when a strong sound A of frequency  $f$  is preceded or followed [1 pts.]  
in time by a weaker sound B at a nearby (or the same) frequency. If the time interval between the sounds is short, sound B may not be audible.  
☒ Temporal masking  
☐ Frequency masking  
☐ hearing threshold  
☐ None of the above
7. ....uses the fact that the ear requires more precise samples at low [1 pts.]  
amplitudes (soft sounds), but is more forgiving at higher amplitudes.  
☐ Quantization  
☐ Compression  
☒ Companding  
☐ Expanding
8. If the output of the compressor function is quantized using a uniform quantizer, and [1 pts.]  
the quantized value transformed via an expander function, the overall effect is the same as using a .....  
☒ nonuniform quantizer  
☐ uniform quantizer  
☐ quantizer  
☐ None of the above
9. ....encoder inputs 14-bit samples and outputs 8-bit codewords. [1 pts.]  
☐ A law  
☒ Mu law  
☐ C law  
☐ X law
10. Ways to encode the difference from one sample to the next rather than encoding [1 pts.]  
the actual sample value. Techniques that transmit information by encoding differences are called  
☐ PCM  
☒ DCM  
☐ DPCM  
☐ DCPM

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