**ELEX 3525 Quiz 1** **Paper, Test 1** A00123456 (0)

10pt *Show your work and underline your final answer. Numeric answers must include units. Books, notes and calculators allowed. No other electronic devices allowed.*

1. (a) A 'scope uses 10 bits to quantize each sample. For a typical waveform, what is the approximate quantization SNR?

   (b) The 'scope can sample at up to 1 GHz. What is the maximum frequency of an input signal that could be accurately sampled?

2. What sequence of bits would be transmitted if the 16-bit value 0x4321 were to be transmitted in little-endian order, most-significant-bit first?

3. What sequence of bytes would be used to encode the Russian (Cyrillic) character з ("ze") which has a Unicode code point of U+437 (hex 0x437) ?

**ELEX 3525 Quiz 1** **Paper, Test 2** A00123456 (255)

10pt *Show your work and underline your final answer. Numeric answers must include units. Books, notes and calculators allowed. No other electronic devices allowed.*

1. (a) A 'scope uses 8 bits to quantize each sample. For a typical waveform, what is the approximate quantization SNR?

   (b) The 'scope can sample at up to 2 GHz. What is the maximum frequency of an input signal that could be accurately sampled?

2. What sequence of bits would be transmitted if the 16-bit value 0x1234 were to be transmitted in little-endian order, most-significant-bit first?

3. What sequence of bytes would be used to encode the Russian (Cyrillic) character д ("de") which has a Unicode code point of U+434 (hex 0x434) ?