# **Chapter 3: Data storage**

# Explain the following terms in Vietnamese

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| **No** | **English Term** | **Vietnamese Term** | **Explain terms in English** | **Explain terms in Vietnamese** |
| 1 | American National Standards Institute (ANSI) |  | An organization that creates standards in programming languages, electrical specifications, communication protocols, and so on |  |
| 2 | American Standard Code for Information Interchange (ASCII) |  | An encoding scheme that defines control and printable characters for 128 values |  |
| 3 | one’s complement |  | A bitwise operation that reverses the value of the bits in a variable |  |
| 4 | overflow |  | The condition that results when there are insufficient bits to represent a number in binary |  |
| 5 | analog |  | A continuously varying entity |  |
| 6 | palette color |  | A technique in raster graphic that uses only a portion of True-Color to encode colors in each application. |  |
| 7 | audio |  | Recording or transmission of sound or music |  |
| 8 | picture element |  | The smallest unit of an image ( pixel) |  |
| 9 | binary digit |  | The smallest unit of information (0 or 1) |  |
| 10 | pixel |  | The smallest unit of an image |  |
| 11 | bit |  | Acronym for *binary digit*. In a computer, the basic storage unit with a value of either 0 or 1. |  |
| 12 | quantization |  | **Quantization** refers to a process that rounds the value of a sample to the closest integer value |  |
| 13 | video |  | A representation of images (called *frames*) in time |  |
| 14 | normalization |  | To make the fixed part of the representation uniform, both the scientific method (for the decimal system) and the floating-point method (for the binary system) use only one nonzero digit on the left of the decimal point |  |
| 15 | MP3 |  | A standard used for compression audio based on MPEG |  |
| 16 | Graphic Interchange Format (GIF) |  | An 8-bit per pixel bitmap image. |  |
| 17 | MPEG |  | A lossy compression method for compressing video (and audio). |  |
| 18 | Joint Photographer Experts Group (JPEG) |  | A standard for compressing images. |  |
| 19 | vector graphic |  | A type of graphics file format in which lines and curves are defined using mathematical formulas. |  |
| 20 | indexed color |  | A technique in raster graphic that uses only a portion of True-Color to encode colors in each application. |  |
| 21 | unsigned integer |  |  |  |
| 22 | mantissa |  |  |  |
| 23 | Unicode |  |  |  |
| 24 | underflow |  |  |  |
| 25 | one’s complement |  |  |  |
| 26 | two’s complement representation |  |  |  |
| 27 | floating-point representation |  |  |  |
| 28 | fixed-point representation |  |  |  |
| 29 | sign-and-magnitude representation |  |  |  |
| 30 | bit depth |  |  |  |
| 31 | raster graphic |  |  |  |
| 32 | color depth |  |  |  |
| 33 | bitmap graphic |  |  |  |
| 34 | True-Color |  |  |  |
| 35 | Excess representation |  |  |  |
| 36 | bit pattern |  |  |  |
| 37 | sampling rate |  |  |  |
| 38 | RGB |  |  |  |
| 39 | truncation error |  |  |  |

# **Chapter 4: Operations on data**

# Explain the following terms in Vietnamese

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| **No** | **English Terms** | **Vietnamese Terms** | **Explain terms in English** | **Explain terms in Vietnamese** |
| 1 | AND operation |  |  |  |
| 2 | NOT operation |  |  |  |
| 3 | XOR operation |  |  |  |
| 4 | OR operation |  |  |  |
| 5 | mask |  |  |  |
| 6 | logical shift operation |  |  |  |
| 7 | arithmetic operation |  |  |  |
| 8 | Circular shift operations |  |  |  |
| 9 | arithmetic shift operation |  |  |  |
| 10 | Boolean algebra |  |  |  |
| 11 | truth table |  |  |  |