Chapter 1 Review Questions

Name: Anh Thu Nguyen

# TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.

1. Our everyday decimal numbering system is base 10. Computers use base 2, which is also known as the binary numbering system.

1) T

1. The smallest unit in a binary system is a byte. 2) F

# MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

1. Eight bits equals one . 3) A
   1. byte B) KB C) MB D) GB
2. If you want to use hand signals to communicate with only two possibilities-yes or no to your friend, what is the minimum number of fingers you need?

A) 1 B) 2 C) 3 D) 4

# TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.

1. A pixel that can have only one of two possible color values requires 1 bits to store the color information.

4) A \_

5) T

# MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

1. A is approximately 1 million bytes. 6) A
   1. megabyte B) gigabyte C) terabyte D) kilobyte
2. If you use a byte to store the grayscale information of each pixel in a grayscale image, how many gray levels are possible for each pixel?

A) 256 B) 512 C) 128 D) 64

7) A

1. Which of the following sizes is the smallest? 8) D A) 24GB B) 24MB C) 240MB D) 2400KB

# TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.

1. Converting from analog to digital involves a two-step process: sampling and quantization. 9) T

# SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

1. The language uses the digits 0 and 1 and is understood by computers. 10) Binary
2. bits equal one byte. 11) 8

# MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

1. When analog information is converted to digital data, we must consider two properties that affect the exactness of the digital representation, one from sampling and one from quantizing. which of the following is from sampling?
   1. sampling rate B) bit depth
2. When analog information is converted to digital data, we must consider two properties that affect the exactness of the digital representation, one from sampling and one from quantizing. which of the following is a result of quantization?

A) bit depth B) sampling rate

12) A

13) A

# TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.

1. Two general strategies to reduce the size of a digital media file are sampling rate reduction and bit depth reduction

14) T

# MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

1. How many bits is the 01101000 binary number and what is the decimal number 15) C
   1. 8 bits, 1 B) 4 bits , 1 C) 8 bits, 104 D) 8bits, 108

# SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

1. A(n) is approximately 1,024 bytes. 16) KB

# MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

1. what is the binary number of decimal number of 61? 17) B A) 00110010 B) 00111101

# SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

|  |  |
| --- | --- |
| 18) Convert the decimal number of 100 to base-8 (Octal) number | 18) 144 |
| 19) Convert the decimal number of 18 to base-16 (hexadecimal) number | 19) 12 |
| 20) convert the binary number (111111) to decimal number | 20) 63 |