# ITEC2110 Digital Media

**Chapter 2 Review Questions**

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

1. . Which of the following is not the same as the others 1) B
   1. Image sampling frequency B) Image brightness

C) Image dimension D) Image sampling rate

1. Which is not the consequences of higher image resolution? 2) B

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| A) bigger file size |  | B) bigger bit depth |  | |
| C) more samples |  | D) more image details |  |  |
| 1. Color in nature is    1. discrete | B) finite | C) digital | D) continuous | 3) D |

1. Which of the following is not a consequence of image quantization? 4) A
   1. Sampling rate is reduced
   2. the number of allowed colors in the image is reduced;
   3. loss of the image fidelity and details;
   4. The details that rely on the subtle color differences are lost during quantization;
2. For a color image, a bit depth of 8 allows different colors. 5) D A) 8 B) 16 C) 128 D) 256
3. The most common bit depth for color image is

## A) 8 B) 256 C) 16 D) 24

1. Increasing the number of colors in the palette will definitely improve the image fidelity.
   1. True B) False

## 6) D

7) B

1. In the quantization step, to capture an analog image to a digital image, . 8) B
   1. a 2-dimensional grid is applied on the image and each tiny cell on the grid is converted into a pixel;
   2. an infinite number of color shades and tones in an analog image is mapped to a set of discrete color values
   3. a 2-dimensional grid is applied on the image to apply dithering to the image
   4. the resulting digital image file is compressed to have a smaller file size
2. A digital image captured at a higher resolution . 9) A
   1. captures more details than the same image stored at a lower resolution
   2. has a smaller file size than the same image stored at a lower resolution
   3. has greater bit depth than the same image stored at a lower resolution
   4. represents more colors than the same image stored at a lower resolution
3. If a digital image has a higher bit depth, than it would have been at a lower bit depth.
   1. it has larger image resolution B) it has more different colors

C) a higher sampling rate is used D) it has larger pixel dimensions

## 10) B

1. Rasterization means . 11) A
   1. converting vector graphics into pixel-based images
   2. converting lines into regions
   3. converting regions into lines
   4. converting pixel-based images into vector graphics
2. Vector graphics are composed of . 12) B
   1. individual pixels which represent spatial samples of the image or scene
   2. mathematical descriptions of image elements which include points, lines, curves,and figures
   3. both of the above
   4. none of the above
3. Which of the following is not one of the main advantages of vector graphics over bitmapped images?
   1. more compact file size
   2. ease of editing the image content pixel by pixel
   3. resolution independence
   4. scalability
4. Sometimes when you magnify a picture on your computer screen, lines that should be straight lines appear to be jagged. This effect is called
   1. indexing B) anti-aliasing C) dithering D) aliasing
5. Without applying any compression, what would be the file size for an image of 4000 X 3000 pixels in 24-bit color depth? Choose the closest one.
   1. 12MB B) 24MB C) 36MB D) 48MB

## 13) B

14) D

15) C

1. Which of the following images is better saved with a bit depth of 24? 16) A
   1. a picture taken by a camera B) a logo designed for a company

C) a cartoon image drawn by an artist D) a poster that contains only a few colors

1. Which of the following is not a lossless compression method? 17) D
   1. PNG B) PSD C) GIF D) JPEG
2. Which of the following should not be used as working files for further editing? 18) D
   1. PNG B) TIFF C) PSD D) JPEG
3. Generally speaking, how does the file size change if the total number of pixels of an image is doubled?
   1. decreased by half B) doubled

C) tripled D) no change

1. Generally speaking, how does the file size change if the number of pixels of both the width and height of an image is doubled?
   1. tripled B) eight times C) no change D) four times
2. Generally speaking, how does the file size change if the bit depth of an image is increased from 8-bit to 16-bit?
   1. tripled B) doubled C) no change D) four times

## 19) B

20) D

21) B

1. Which of the following file extensions indicates pixel-based files? 22) D
   1. TXT B) DOC C) EPS D) PNG
2. Which file extension indicates vector graphic files 23) D
   1. BMP B) TIFF C) GIF D) EPS
3. Which of the following is the red color in RGB model? 24) D A) (0,0,255) B) (0,0,0) C) (0,255,0) D) (255,0,0)
4. In RGB model, what would you get if the color Red is mixed with Cyan? 25) D
   1. Red B) Cyan C) Black D) White
5. In RGB color model, what color would it be if the color Red is mixed with Yellow? 26) D
   1. White B) Cyan C) Red D) Yellow
6. In RGB color model, what color would it be if the color Magenta is mixed with Black? 27) B
   1. Blue B) Magenta C) Cyan D) Black
7. What color would it be if the color Yellow is mixed with White in RGB model? 28) D
   1. Yellow B) dark yellow C) pink D) White
8. What is the hex form of the color (127, 12, 127) in RGB model? 29) D A) 800C80 B) 8F0C8F C) 7FC7F D) 7F0C7F
9. In RGB model, what would it be if white is mixed with black? 30) D
   1. Cyan B) gray C) light gray D) white
10. In CMYK color model, what would it be if Cyan is mixed with Green? 31) B
    1. Cyan B) Green C) Red D) Black
11. In CMYK color model, what color would it be if Red is mixed with Blue and Green? 32) D
    1. Cyan B) Yellow C) White D) Black
12. In CMYK color model, what color would it be if Black is mixed with White? 33) C
    1. White B) Ligth Gray C) Black D) Gray
13. In CMYK color model, what color would it be if Red is mixed with Blue? 34) B
    1. Red B) Black

C) None of the above D) White

1. Which of the following is not correct? 35) B
   1. Some of the colors that monitors can reproduce cannot be reproduced by inkjet printers
   2. RGB and CMYK Color Space encompass all the colors human can see
   3. Some of the colors that inkjet printers can reproduce cannot be reproduced by monitors
   4. Color Gamuts refer to the range of colors of a specific system or device can produce or capture
2. Which one of the following color models takes the form of a hexacone? 36) C
   1. CIE XYZ B) CMY C) HSB D) RGB
3. Which of the primaries in the HSB color model takes the form of a color wheel? 37) A
   1. Hue B) Saturation C) Darkness D) Brightness
4. Which of the following color model uses subtractive color mixing method? 38) B
   1. RGB B) CMY C) HSB D) CIE XYZ

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| 39) What are the CMY values for white?  A) (0%, 0%, 0%) | B) (100%, 100%, 100%) | 39) | A |
| C) (255,255,255) | D) None of the above |  |  |
| 40) What are the CMY values for red?  A) (0%, 100%, 100%) | B) (100%, 0%, 100%) | 40) | A |
| C) (100%, 100%, 0%) | D) None of the above |  |  |