

1. Today, all networked information is sent using digital formats.

- a. True
- b. False

Answer: _____

2. A single bit of information represents two states or values.

- a. True
- b. False

Answer: _____

3. The terms **byte** and **octet** describe the same amount of information.

- a. True
- b. False

Answer: _____

4. Voice communication can only be done using an analog signal.

- a. True
- b. False

Answer: _____

5. PBX and Centrex systems provide similar functionality from the users point-of-view.

- a. True
- b. False

Answer: _____

6. Services transmitting video information use a series of vector images to represent moving images.

- a. True
- b. False

Answer: _____

7. System response time and system cost are closely related to each other.

- a. True
- b. False

Answer: _____

8. Response time is extremely important when implementing email systems.

- a. True
- b. False

Answer: _____

9. When transmitting video information, compression ratios can range as high as 100:1 with little loss of perceived quality.

- a. True
- b. False

Answer: _____

10. Interlacing is a method of reducing the bandwidth requirements for video transmissions.

- a. True
- b. False

Answer: _____

11. When using analog communications, channel capacity is measure in hertz (Hz) where 1 Hz equals 1000 oscillations per second.

- a. True
- b. False

Answer: _____

12. The United States national version of IRA is referred to as the American Standard Code for Information Interchange (ASCII).

- a. True
- b. False

Answer: _____

13. For each of the following binary values, indicate which decimal value is equivalent.

- ____ 1. 10
- ____ 2. 1010
- ____ 3. 11
- ____ 4. 1111

___ 5. 101

- a. 3
- b. 10
- c. 15
- d. 5
- e. 2

14. Select all of the following which represent digital forms of information.

- a. A watch with two hands
- b. A mechanical odometer on a car
- c. A watch that displays time as HH:MM
- d. A gas gauge
- e. A page filled with English prose
- f. A fax transmission

Answers: _____

15. Which of the following represents the most basic unit of digital information?

- a. Byte
- b. Nibble
- c. Pixel
- d. Bit
- e. Octet

Answer: _____

16. Standard voice telephone lines, such as those found in residences, limit bandwidth to

- a. 300 Hz
- b. 3,400 Hz
- c. 8,000 Hz
- d. 20,000 Hz
- e. 1,410,000 Hz

Answer: _____

17. A stereo compact disc typically requires the bandwidth for each channel to be

- a. 300 Hz
- b. 3,400 Hz
- c. 8,000 Hz
- d. 20,000 Hz
- e. 1,410,000 Hz

Answer: _____

18. When using data communications with 8-bit codes, the number of alphabetic symbols

- a. must be exactly 256.
- b. must be greater than 8.
- c. can be greater than 1024 bytes.
- d. must be less than 256.
- e. determines the number of octets.

Answer: _____

19. Which of the following is the binary representation of the decimal value 22?

- a. 10110
- b. 11000
- c. 10010
- d. 10110
- e. 10101

Answer: _____

20. Which of the following is the binary representation of the decimal value 24?

- a. 10110
- b. 11000
- c. 10010
- d. 10110
- e. 10101

Answer: _____

21. Which of the following is the binary representation of the decimal value 18?

- a. 10110
- b. 11000
- c. 10010
- d. 10110
- e. 10101

Answer: _____

22. Which of the following is the binary representation of the decimal value 21?

- a. 10110
- b. 11000
- c. 10010
- d. 10110

e. 10101

Answer: _____

23. The time interval between when a user presses a key and when the result of that action arrives at his or her workstation is called the

- a. response time.
- b. turn-around time.
- c. think time.
- d. delay time.
- e. transmission time.

Answer: _____

24. A representation of images that uses straight and curved line segments is called _____.

Answer:

25. A representation of images that uses an array of pixels is called _____.

Answer:

26. When using an eight-value gray-scale image, _____ bits per pixel are needed.

Answer:

27. Place the following information types in order by the required data rates with the 1 needing the slowest and 6 needing the fastest.

- ___ color image
- ___ HDTV
- ___ text
- ___ black and white image
- ___ CD audio
- ___ voice

28. List the four types of information that are communicated over networks.

Answer:

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- c. think time.
- d. delay time.
- e. transmission time.

24. A representation of images that uses straight and curved line segments is called _____.

Correct Answer(s):
a. vector graphics

25. A representation of images that uses an array of pixels is called _____.

Correct Answer(s):
a. raster graphics

26. When using an eight-value gray-scale image, ____ bits per pixel are needed.

Correct Answer(s):
a. 3
b. three

27. Place the following information types in order by the required data rates with the 1 needing the slowest and 6 needing the fastest.

1. text
2. black and white image

3. color image
4. voice
5. CD audio
6. HDTV

28. List the four types of information that are communicated over networks.

Correct Answer:

The four types are voice, data, image, and video.

1. b.

2. a.

3. a.

4. b.

5. a.

6. b.

7. a.

8. b.

9. a.

10. a.

11. b.

12. a.

13. [a] 1. 10
[b] 2. 1010
[c] 3. 11
[d] 4. 1111
[e] 5. 101

- a. 2
- b. 10
- c. 3
- d. 15
- e. 5

14. c.
e.
f.

- 15. d.
- 16. a.
- 17. d.
- 18. d.
- 19. a.
- 20. b.
- 21. c.
- 22. e.
- 23. a.
- 24. a. vector graphics
- 25. a. raster graphics
- 26. a. 3
b. three
- 27. 1. text
2. black and white image
3. color image
4. voice
5. CD audio
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