

CCNA 1 Module 3

1. Match the columns:

- |              |  |
|--------------|--|
| 1) Neutrons  | A) Particles that have a negative charge   |
| 2) Protons   | B) Particles that have no charge (neutral) |
| 3) Electrons | C) Particles that have a positive charge   |

- A. 1-C, 2-B, 3-A
- B. 1-A, 2-C, 3-B
- C. 1-B, 2-C, 3-A
- D. 1-B, 2-A, 3-C

2. Which of the following regarding electricity is untrue?

- A. Opposite charges react to each other with a force that causes them to be attracted to each other.
- B. Like charges react to each other with a force that causes them to repel each other.
- C. In the case of opposite and like charges, the force increases as the charges move closer to each other.
- D. None of the above.

3. Match the following to their respective units of measurement:

- |               |           |
|---------------|-----------|
| 1) Voltage    | A) Ohm    |
| 2) Current    | B) Ampere |
| 3) Resistance | C) Volt   |

- A. 1-C, 2-B, 3-A
- B. 1-B, 2-C, 3-A
- C. 1-A, 2-C, 3-B
- D. 1-C, 2-B, 3-A

4. Electrons flow in \_\_\_\_\_ loops called \_\_\_\_\_.

- A. Open; voltage
- B. Closed; voltage
- C. Open; circuits
- D. Closed, circuits

5. What is the maximum cable length for STP?

- A. 100 feet
- B. 150 feet
- C. 100 meters
- D. 1000 meters

6. How many pairs of wires make up a UTP cable?

- A. 2
- B. 4
- C. 6
- D. 8

7. Which connector does UTP use?
  - A. STP
  - B. BNC
  - C. RJ-45
  - D. RJ-69
  
8. What is an advantage that coaxial cable has over STP or UTP?
  - A. It is capable of achieving 10 Mbps to 100 Mbps.
  - B. It is inexpensive.
  - C. It can run for a longer distance unboosted.
  - D. None of the above.
  
9. What does the twisting of the wires do in a twisted-pair cable?
  - A. It makes it thinner.
  - B. It makes it less expensive.
  - C. It reduces noise problems.
  - D. It allows six pairs to fit in the space of four pairs.
  
10. What is the importance of the EIA/TIA standards? Select all that apply.
  - A. They provide a framework for the implementation of the OSI reference model.
  - B. They provide guidelines for manufacturers to follow to ensure compatibility.
  - C. They provide the minimum media requirements for multiproduct and multi-vendor environment.
  - D. None of the above.
  
11. A fiber-optic cable transmits multiple streams of LED-generated light.
  - A. Multimode
  - B. Multichannel
  - C. Multiphase
  - D. None of the above
  
12. What is one advantage of using fiber-optic cable in networks?
  - A. It is inexpensive.
  - B. It is easy to install.
  - C. It is an industry standard and is available at any electronics store.
  - D. It is capable of higher data rates than either coaxial or twisted-pair cable.
  
13. Which fiber-optic cable type is typically used for outside installations?
  - A. Tight-buffered
  - B. Tight-tube
  - C. Loose-buffered
  - D. Loose-tube
  
14. What is the light source typically used in single mode fiber optics?
  - A. Photo transistor
  - B. Laser
  - C. Photo resistor
  - D. LED

15. Which term describes the angle at which a ray hits a glass surface?
- A. Angle of reflection
  - B. Angle of refraction
  - C. Angle of incidence
  - D. Angle of attack
16. Modulation is a process of changing amplitude, frequency, or phase. Which acronym does not represent a type of modulation?
- A. AM
  - B. FM
  - C. PM
  - D. RM
17. Which range does not correctly identify an unlicensed wireless frequency?
- A. 2.4 GHz
  - B. 5 GHz
  - C. 9 GHz
  - D. 900 MHz
18. Which statement does not describe a benefit of spread spectrum?
- A. Spread spectrum transmissions are transmitted at high speeds.
  - B. Spread spectrum is less susceptible to radio noise.
  - C. Spread spectrum has a higher probability of correct reception.
  - D. Spread spectrum creates little interference.
19. Which statement does not describe the features of direct-sequence spread spectrum (DSSS)?
- A. DSSS is reliable because each bit is represented by a string of 1s and 0s.
  - B. If up to 40 percent of the string is lost, the original transmission can be reconstructed.
  - C. DSSS technology has low throughput of data and short-range access.
  - D. The recently released evolution of the IEEE standard, 802.11b, provides for a full Ethernet-like data rate of 11 Mbps over DSSS.
20. Which of the following is not a feature of wired equivalent privacy (WEP)?
- A. WEP uses the RC4 stream cipher for encryption.
  - B. WEP is a security mechanism defined within in the 802.3 standards.
  - C. One of the goals of WEP is to deny access to the network by unauthorized users who do not possess the appropriate WEP key.
  - D. None of the above.

## Answers

### Module 3

1. Match the columns:

- 1) Neutrons    A) Particles that have a negative charge
- 2) Protons    B) Particles that have no charge (neutral)
- 3) Electrons    C) Particles that have a positive charge

C. 1-B, 2-C, 3-A

2. Which of the following regarding electricity is untrue?

D. None of the above.

3. Match the following to their respective units of measurement:

- 1) Voltage        A) Ohm
- 2) Current        B) Ampere
- 3) Resistance    C) Volt

A. 1-C, 2-B, 3-A

D. 1-C, 2-B, 3-A

4. Electrons flow in loops called

D. Closed, circuits

5. What is the maximum cable length for STP?

C. 100 meters

6. How many pairs of wires make up a UTP cable?

B. 4

7. Which connector does UTP use?

C. RJ-45

8. What is an advantage that coaxial cable has over STP or UTP?

C. It can run for a longer distance unboosted.

A and B are also advantages

9. What does the twisting of the wires do in a twisted-pair cable?

C. It reduces noise problems.

10. What is the importance of the EIA/TIA standards? Select all that apply.

B. They provide guidelines for manufacturers to follow to ensure compatibility.

C. They provide the minimum media requirements for multiproduct and multi-vendor environment.

11. A fiber-optic cable transmits multiple streams of LED-generated light.
  - A. Multimode
12. What is one advantage of using fiber-optic cable in networks?
  - D. It is capable of higher data rates than either coaxial or twisted-pair cable.
13. Which fiber-optic cable type is typically used for outside installations?
  - D. Loose-tube
14. What is the light source typically used in single-mode fiber optics?
  - B. Laser
15. Which term describes the angle at which a ray hits a glass surface?
  - C. Angle of incidence
16. Modulation is a process of changing amplitude, frequency, or phase. Which acronym does not represent a type of modulation?
  - D. RM
17. Which range does not correctly identify an unlicensed wireless frequency?
  - C. 9 GHz
18. Which statement does not describe a benefit of spread spectrum?
  - A. Spread spectrum transmissions are transmitted at high speeds.
19. Which statement does not describe the features of direct-sequence spread spectrum (DSSS)?
  - C. DSSS technology has low throughput of data and short-range access.
20. Which of the following is not a feature of wired equivalent privacy (WEP)?
  - B. WEP is a security mechanism defined within in the 802.3 standards.