Student: _____

1. What is a telecommunications system?
   A. Enables the transmission of data over public or private networks
   BA communications, data exchange, and resource-sharing system created by linking two or more
   . computers and establishing standards, or protocols, so that they can work together
   C Any network without a central file server and in which all computers in the network have access to the
   . public files located on all other workstations
   D. A computer that is designed to request information from a server

2. What is a network?
   A. Enables the transmission of data over public or private networks
   BA communications, data exchange, and resource-sharing system created by linking two or more
   . computers and establishing standards, or protocols, so that they can work together
   C Any network without a central file server and in which all computers in the network have access to the
   . public files located on all other workstations
   D. A computer that is designed to request information from a server

3. Which of the following is not a characteristic of what could happen to VoIP Traffic?
   A. Intercepted
   B. Captured
   C. Modified
   D. Codified

4. Which is not a feature available using VoIP solutions?
   A. Five-way calling
   B. Call waiting
   C. Caller ID
   D. Easy navigation

5. The _____ generation of successful PDAs were Palm Pilots.
   A. first
   B. second
   C. third
   D. fourth

6. Which cellular networks are circuit-switched digital networks that can transmit data at about 10 kilobits per second (Kbps), which is extremely slow?
   A. 2G
   B. 3G
   C. 4G
   D. 5G

7. Which networks use a newer packet-switched technology that is much more efficient (and hence faster) than dedicated circuit-switched networks?
   A. 2G
   B. 3G
   C. 4G
   D. 5G

8. Which network technology will take mobile communication another step up to integrate radio and television transmissions, and to consolidate the world's phone standards into one high-speed technology?

   A. 2G
   B. 3G
   C. 4G
   D. 5G

9. Which is not a common GIS use?
   A. Digital phone calls
   B. Mapping densities
   C. Information alerts
   D. Finding what is nearby

10. WiMAX offers Web access speeds that are _____ faster than typical wireless networks, though they are still slower than wired broadband.
   A. Ten times
   B. Five times
   C. Fifty times
   D. Two times

11. What is a computer network that uses cables or radio signals to link two or more computers within a geographically limited area, generally one building or a group of buildings?
   A. Local area network
   B. Wide area network
   C. Metropolitan area network
   D. Peer-to-peer network

12. What is a computer network that provides data communication services for business in geographically dispersed areas (such as across a country or around the world).
   A. Local area network
   B. Wide area network
   C. Metropolitan area network
   D. Peer-to-peer network

13. What is a computer network that provides connectivity in a geographic area or region larger than that covered by a local are network, but smaller than the area covered by a wide area network?
   A. Client/server network
   B. Corporate network
   C. Metropolitan area network
   D. Peer-to-peer network

14. What is a virtual private network?
   A. Are natural parts of the Earth's environment that can be used as physical paths to carry electrical signals.
   B. A way to use the public telecommunication infrastructure (e.g., Internet) to provide secure access to an organization's network
   C. A private network, provided by a third party, for exchanging information through a high capacity connection.
   D. Refers to a type of cable composed of four (or more) copper wires twisted around each other within a plastic sheath

15. What is a value-added network?
    A. Are natural parts of the Earth's environment that can be used as physical paths to carry electrical signals.
    B. A way to use the public telecommunication infrastructure (e.g., Internet) to provide secure access to an organization's network
    C. A private network, provided by a third party, for exchanging information through a high capacity connection.
    D. Refers to a type of cable composed of four (or more) copper wires twisted around each other within a plastic sheath

16. What is immediate, up-to-date information?
    A. Real-time information
    B. Real-time systems
    C. Information granularity
    D. All of the above

17. Which of the following is not a common example of a wireless device?
    A. Cellular phone
    B. Bluetooth
    C. RFID
    D. Ethernet

18. Which of the following is not an example of a wireless technology that is being integrated throughout business?
    A. RFID
    B. GPS
    C. Bluetooth
    D. Micro hard drive

19. What is wireless fidelity?
    A. A means of linking computers using infrared or radio signals
    B. An omnidirectional wireless technology that provides limited-range voice and data transmission over the unlicensed 2.4-GHz frequency band, allowing connections with a wide variety of fixed and portable devices that normally would have to be cabled together
    C. A technology that uses active or passive tags in the form of chips or smart labels that can store unique identifiers and relay this information to electronic readers
    D. Commonly used to transmit network signals over great distances

20. What is Bluetooth?
    A. A means of linking computers using infrared or radio signals
    B. A telecommunications industry specification that describes how mobile phones, computers, and personal digital assistants (PDAs) can be easily interconnected using a short-range wireless connection
    C. A technology that uses active or passive tags in the form of chips or smart labels that can store unique identifiers and relay this information to electronic readers
    D. Commonly used to transmit network signals over great distances

21. What is radio frequency identification?
    A. A means of linking computers using infrared or radio signals
    B. An omnidirectional wireless technology that provides limited-range voice and data transmission over the unlicensed 2.4-GHz frequency band, allowing connections with a wide variety of fixed and portable devices that normally would have to be cabled together
    C. A technology that uses active or passive tags in the form of chips or smart labels that can store unique identifiers and relay this information to electronic readers
    D. Commonly used to transmit network signals over great distances

22. What is a microwave transmitter?
    A. A means of linking computers using infrared or radio signals
    BAn omnidirectional wireless technology that provides limited-range voice and data transmission over
    . the unlicensed 2.4-GHz frequency band, allowing connections with a wide variety of fixed and portable devices that normally would have to be cabled together
    CA technology that uses active or passive tags in the form of chips or smart labels that can store unique
    . identifiers and relay this information to electronic readers
    D. Commonly used to transmit network signals over great distances

23. What is a global positioning system?
    A. A device that determines current latitude, longitude, speed, and direction of movement
    B. Designed to work with information that can be shown on a map
    CContains a microchip and an antenna, and typically work by transmitting a serial number via radio
    . waves to an electronic reader, which confirms the identity of a person or object bearing the tag
    D. Commonly used to transmit network signals over great distances

24. What is a geographic information system?
    A. A device that determines current latitude, longitude, speed, and direction of movement
    B. Designed to work with information that can be shown on a map
    CContains a microchip and an antenna, and typically work by transmitting a serial number via radio
    . waves to an electronic reader, which confirms the identity of a person or object bearing the tag
    D. Commonly used to transmit network signals over great distances

25. What is an RFID tag?
    A. A device that determines current latitude, longitude, speed, and direction of movement
    B. Designed to work with information that can be shown on a map
    CContains a microchip and an antenna, and typically works by transmitting a serial number via radio
    . waves to an electronic reader, which confirms the identity of a person or object bearing the tag
    D. Commonly used to transmit network signals over great distances

26. Which of the following is not a component of an RFID tag?
    A. Tag
    B. Reader
    C. Store
    D. Computer network

27. What is the order of how RFID works in the supply chain?
    A. Manufacturer, store, distribution center, home
    B. Home, manufacturer, store, distribution center
    C. Distribution center, manufacturer, store, home
    D. Manufacturer, distribution center, store, home

28. Which of the following is a driver of wireless growth?
    A. Universal access to information and applications
    B. The invention of the micro hard drive
    C. GIS
    D. All of the above

29. What are the three technologies influencing business mobility?
    A. Bluetooth, RFID, satellite
    B. Bluetooth, security sensor, satellite
    C. RFID, satellite, RFID tags
    D. Satellite, GPS, GIS

30. Which company produces the highly successful BlackBerry, the wireless handheld computer now in the hands of more than 1.3 million users worldwide?
    A. Bluetooth
    B. Research in Motion (RIM)
    C. UPS
    D. Apple

31. Which two companies are competing head-to-head with wireless technology?
    A. RIM and UPS
    B. UPS and FedEx
    C. FedEx and RIM
    D. Apple and Microsoft

32. Which of the following technologies provides nearly universal coverage?
    A. Fixed wireless
    B. Satellite
    C. DSL
    D. T1/T3

33. Which of the following technologies provides highest speed?
    A. Satellite
    B. Fibre-to-the-home
    C. DSL
    D. T1/T3

34. The key advantage of providing data communication links between a company and its suppliers or customers is the sharing of data.
    True False

35. Skype has long been one of the most popular VoIP options for consumers—largely because of its no cost
    True False

36. Medium Capacity is the difference between the highest and the lowest frequencies that can be transmitted on a single medium, and it is a measure of the medium's capacity.
    True False

37. The term bandwidth generally refers to high-speed Internet connections transmitting data at speeds greater than 200 kilobytes per second (Kbps), compared to the 56 Kbps maximum speed offered by traditional dial-up connections.
    True False

38. FedEx's famous tracking system, which can find a package's location from its tracking number, uses a wireless courier-management system.
    True False

39. A PDA differs from a normal cell phone in that it has an operating system and local storage, so users can add and store data, send and receive email, and install programs to the phone as they could with a smartphone.
    True False

40. The global positioning system is owned and operated by the U.S. Department of Defense and is not available for general use around the world.
    True False

41. Some leading-edge farmers use GPS satellite navigation to map and analyze fields, telling the farmers where to apply the proper amounts of seeds, fertilizer, and herbicides.
    True False

42. Common examples of wireless devices include cellular phones and pagers, GPS, and two-way radios.
True False

43. Mobile technology gives users a live (Internet) connection via satellite or radio transmitters.
True False

44. Wireless means the technology can travel with the user, but it is not necessarily in real-time.
True False

45. Mobile means the technology can travel with the user, but it is not necessarily in real-time.
True False

46. The term *wireless* refers to any type of electrical or electronic operation that is accomplished without the use of a "hard wired" connection.
True False

47. The term *mobile* refers to any type of electrical or electronic operation that is accomplished without the use of a "hard wired" connection.
True False

48. _____ has long been one of the most popular VoIP options for consumers—largely because of its low cost
_____

49. Much like data, VoIP traffic can be_____, captured, or modified.
_____

50. _____ is the difference between the highest and the lowest frequencies that can be transmitted on a single medium, and it is a measure of the medium's capacity.
_____

51. The transportation industry is using _____ devices to help determine current locations and alternate driving routes.
_____

52. 3G networks are designed for high-speed transmission of _____ and voice.
_____

53. _____ are small, handheld computers capable of entirely digital communications transmission.
_____

54. A _____ differs from a normal cell phone in that it has an operating system and local storage, so users can add and store data, send and receive email, and install programs to the phone as they could with a PDA.
_____

55. _____ are wireless mobile content services that provide location-specific data to mobile users moving from location to location
_____

56. _____ is the capability of two or more computer systems to share data and resources, even though they are made by different manufacturers.
_____

57. A _____ area network (MAN) is a computer network that provides connectivity in a geographic area or region larger than that covered by a local area network, but smaller than the area covered by a wide area network.
_____

58. _____ fidelity is a means of linking computers using infrared or radio signals.
_____

59. _____ technology means the technology can travel with the user, but it is not necessarily in real-time.
_____

60. _____ technology gives users a live connection via satellite or radio transmitters.
_____

61. _____ is an omnidirectional wireless technology that provides limited-range voice and data transmission over the unlicensed 2.4-GHz frequency band, allowing connections with a wide variety of fixed and portable devices that normally would have to be cabled together.
_____

62. Radio frequency identification tags have the potential to reinvent the _____ chain.
_____

63. The three components of an RFID system include the tag, _____, and computer network.
_____

64. RFID in the retail supply chain includes the manufacturer, distribution center, store, and _____.
_____

65. Microwave _____ are commonly used to transmit network signals over great distances.
_____

66. A global _____ system is a device that determines current latitude, longitude, speed, and direction of movement.
_____

67. A _____ information system is designed to work with information that can be shown on a map.
_____

68. Compare LANs, WANs, and MANs.

69. Explain how a wireless device can help an organization perform business anywhere, anyplace, anytime.

70. Describe RFID and how it can be used to help make a supply chain more effective.

71. List and discuss the key factors inspiring the growth of wireless technologies.

72. Describe the business benefits associated with enterprise mobility.

73. Discuss and differentiate the different generations of mobile communications technologies.

74. List and discuss concerns about a number of privacy issues associated with Location-based services (LBS)

75. Distinguish between mobile and wireless technologies.

12 Key

1. What is a telecommunications system?
(p. 376) **A.** Enables the transmission of data over public or private networks
B. A communications, data exchange, and resource-sharing system created by linking two or more computers and establishing standards, or protocols, so that they can work together
C. Any network without a central file server and in which all computers in the network have access to the public files located on all other workstations
D. A computer that is designed to request information from a server

This is the definition of a telecommunications system.

Chapter - Chapter 12 #1
Gradable: automatic
Learning Outcome: 12.1
Level: Easy

2. What is a network?
(p. 376) A. Enables the transmission of data over public or private networks
B. A communications, data exchange, and resource-sharing system created by linking two or more computers and establishing standards, or protocols, so that they can work together
C. Any network without a central file server and in which all computers in the network have access to the public files located on all other workstations
D. A computer that is designed to request information from a server

This is the definition of network.

Chapter - Chapter 12 #2
Gradable: automatic
Learning Outcome: 12.1
Level: Easy

3. Which of the following is not a characteristic of what could happen to VoIP Traffic?
(p. 378) A. Intercepted
B. Captured
C. Modified
D. Codified

Much like data, VoIP traffic can be intercepted, captured, or modified.

Chapter - Chapter 12 #3
Gradable: automatic
Learning Outcome: 12.1
Level: Medium

4. Which is not a feature available using VoIP solutions?
(p. 379) **A.** Five-way calling
B. Call waiting
C. Caller ID
D. Easy navigation

There is no five-way calling.

Chapter - Chapter 12 #4
Gradable: automatic
Learning Outcome: 12.1
Level: Medium

5. The _____ generation of successful PDAs were Palm Pilots.
(p. 388)
A. first
B. second
C. third
D. fourth

The first generation of successful PDAs were Palm Pilots.

Chapter - Chapter 12 #5
Gradable: automatic
Learning Outcome: 12.3
Level: Medium

6. Which cellular networks are circuit-switched digital networks that can transmit data at about 10 kilobits per second (Kbps), which is extremely slow?
(p. 387)
A. 2G
B. 3G
C. 4G
D. 5G

Second-generation cellular networks are circuit-switched digital networks that can transmit data at about 10 kilobits per second (Kbps), which is extremely slow.

Chapter - Chapter 12 #6
Gradable: automatic
Learning Outcome: 12.3
Level: Medium

7. Which networks use a newer packet-switched technology that is much more efficient (and hence faster) than dedicated circuit-switched networks?
(p. 387)
A. 2G
B. 3G
C. 4G
D. 5G

Third-generation (3G) networks use a newer packet-switched technology that is much more efficient (and hence faster) than dedicated circuit-switched networks.

Chapter - Chapter 12 #7
Gradable: automatic
Learning Outcome: 12.3
Level: Medium

8. Which network technology will take mobile communication another step up to integrate radio and television transmissions, and to consolidate the world's phone standards into one high-speed technology?
(p. 387)
A. 2G
B. 3G
C. 4G
D. 5G

The 4G technology will take mobile communication another step up to integrate radio and television transmissions, and to consolidate the world's phone standards into one high-speed technology.

Chapter - Chapter 12 #8
Gradable: automatic
Learning Outcome: 12.3
Level: Medium

9. Which is not a common GIS use?
(p. 393)
A. Digital phone calls
B. Mapping densities
C. Information alerts
D. Finding what is nearby

GIS is not a phone system

Chapter - Chapter 12 #9
Gradable: automatic
Learning Outcome: 12.2
Level: Medium

10. WiMAX offers Web access speeds that are _____ faster than typical wireless networks, though they are still slower than wired broadband.
(p. 395)
A. Ten times
B. Five times
C. Fifty times
D. Two times

WiMAX offers Web access speeds that are five times faster than typical wireless networks, though they are still slower than wired broadband.

Chapter - Chapter 12 #10
Gradable: automatic
Learning Outcome: 12.5
Level: Medium

11. What is a computer network that uses cables or radio signals to link two or more computers within a geographically limited area, generally one building or a group of buildings?
(p. 377)
A. Local area network
B. Wide area network
C. Metropolitan area network
D. Peer-to-peer network

This is the definition of LAN.

Chapter - Chapter 12 #11
Gradable: automatic
Learning Outcome: 12.1
Level: Easy

12. What is a computer network that provides data communication services for business in geographically dispersed areas (such as across a country or around the world).
(p. 377)
A. Local area network
B. Wide area network
C. Metropolitan area network
D. Peer-to-peer network

This is the definition of WAN.

Chapter - Chapter 12 #12
Gradable: automatic
Learning Outcome: 12.1
Level: Easy

13. What is a computer network that provides connectivity in a geographic area or region larger than that covered by a local are network, but smaller than the area covered by a wide area network?
(p. 377)
A. Client/server network
B. Corporate network
C. Metropolitan area network
D. Peer-to-peer network

This is the definition of MAN.

Chapter - Chapter 12 #13
Gradable: automatic
Learning Outcome: 12.1
Level: Easy

14. What is a virtual private network?
(p. 380)
A. Are natural parts of the Earth's environment that can be used as physical paths to carry electrical signals.
B. A way to use the public telecommunication infrastructure (e.g., Internet) to provide secure access to an organization's network
C. A private network, provided by a third party, for exchanging information through a high capacity connection.
D. Refers to a type of cable composed of four (or more) copper wires twisted around each other within a plastic sheath

This is the definition of VPN.

Chapter - Chapter 12 #14
Gradable: automatic
Learning Outcome: 12.2
Level: Easy

15. What is a value-added network?
(p. 380)
A. Are natural parts of the Earth's environment that can be used as physical paths to carry electrical signals.
B. A way to use the public telecommunication infrastructure (e.g., Internet) to provide secure access to an organization's network
C. A private network, provided by a third party, for exchanging information through a high capacity connection.
D. Refers to a type of cable composed of four (or more) copper wires twisted around each other within a plastic sheath

This is the definition of VAN.

Chapter - Chapter 12 #15
Gradable: automatic
Learning Outcome: 12.2
Level: Easy

16. What is immediate, up-to-date information?
(p. 399)
A. Real-time information
B. Real-time systems
C. Information granularity
D. All of the above

This is the definition of real-time information.

Chapter - Chapter 12 #16
Gradable: automatic
Learning Outcome: 12.2
Level: Easy

17. Which of the following is not a common example of a wireless device?
(p. 393)
A. Cellular phone
B. Bluetooth
C. RFID
D. Ethernet

Ethernet is not a wireless device.

Chapter - Chapter 12 #17
Gradable: automatic
Learning Outcome: 12.3
Level: Easy

18. Which of the following is not an example of a wireless technology that is being integrated throughout business?
(p. 393)
A. RFID
B. GPS
C. Bluetooth
D. Micro hard drive

A micro hard drive is not a wireless device.

Chapter - Chapter 12 #18
Gradable: automatic
Learning Outcome: 12.3
Level: Medium

19. What is wireless fidelity?
(p. 393)
A. A means of linking computers using infrared or radio signals
B. An omnidirectional wireless technology that provides limited-range voice and data transmission over the unlicensed 2.4-GHz frequency band, allowing connections with a wide variety of fixed and portable devices that normally would have to be cabled together
C. A technology that uses active or passive tags in the form of chips or smart labels that can store unique identifiers and relay this information to electronic readers
D. Commonly used to transmit network signals over great distances

This is the definition of wireless fidelity.

Chapter - Chapter 12 #19
Gradable: automatic
Learning Outcome: 12.5
Level: Easy

20. What is Bluetooth?
(p. 375)
A. A means of linking computers using infrared or radio signals
B. A telecommunications industry specification that describes how mobile phones, computers, and personal digital assistants (PDAs) can be easily interconnected using a short-range wireless connection
C. A technology that uses active or passive tags in the form of chips or smart labels that can store unique identifiers and relay this information to electronic readers
D. Commonly used to transmit network signals over great distances

Bluetooth is a telecommunications industry specification that describes how mobile phones, computers, and personal digital assistants (PDAs) can be easily interconnected using a short-range wireless connection.

Chapter - Chapter 12 #20
Gradable: automatic
Learning Outcome: 12.3
Level: Easy

21. What is radio frequency identification?
(p. 395) A. A means of linking computers using infrared or radio signals
B. An omnidirectional wireless technology that provides limited-range voice and data transmission over the unlicensed 2.4-GHz frequency band, allowing connections with a wide variety of fixed and portable devices that normally would have to be cabled together
C. A technology that uses active or passive tags in the form of chips or smart labels that can store unique identifiers and relay this information to electronic readers
D. Commonly used to transmit network signals over great distances

This is the definition of RFID.

Chapter - Chapter 12 #21
Gradable: automatic
Learning Outcome: 12.5
Level: Easy

22. What is a microwave transmitter?
(p. 389) A. A means of linking computers using infrared or radio signals
B. An omnidirectional wireless technology that provides limited-range voice and data transmission over the unlicensed 2.4-GHz frequency band, allowing connections with a wide variety of fixed and portable devices that normally would have to be cabled together
C. A technology that uses active or passive tags in the form of chips or smart labels that can store unique identifiers and relay this information to electronic readers
D. Commonly used to transmit network signals over great distances

This is the definition of microwave transmitter.

Chapter - Chapter 12 #22
Gradable: automatic
Learning Outcome: 12.4
Level: Easy

23. What is a global positioning system?
(p. 391) **A.** A device that determines current latitude, longitude, speed, and direction of movement
B. Designed to work with information that can be shown on a map
C. Contains a microchip and an antenna, and typically work by transmitting a serial number via radio waves to an electronic reader, which confirms the identity of a person or object bearing the tag
D. Commonly used to transmit network signals over great distances

This is the definition of GPS.

Chapter - Chapter 12 #23
Gradable: automatic
Learning Outcome: 12.4
Level: Easy

24. What is a geographic information system?
(p. 392) A. A device that determines current latitude, longitude, speed, and direction of movement
B. Designed to work with information that can be shown on a map
C. Contains a microchip and an antenna, and typically work by transmitting a serial number via radio waves to an electronic reader, which confirms the identity of a person or object bearing the tag
D. Commonly used to transmit network signals over great distances

This is the definition of GIS.

Chapter - Chapter 12 #24
Gradable: automatic
Learning Outcome: 12.4
Level: Easy

25. What is an RFID tag?
(p. 395) A. A device that determines current latitude, longitude, speed, and direction of movement
B. Designed to work with information that can be shown on a map
CContains a microchip and an antenna, and typically works by transmitting a serial number via radio **.** waves to an electronic reader, which confirms the identity of a person or object bearing the tag
D. Commonly used to transmit network signals over great distances

This is the definition of an RFID tag.

Chapter - Chapter 12 #25
Gradable: automatic
Learning Outcome: 12.5
Level: Easy

26. Which of the following is not a component of an RFID tag?
(p. 395) A. Tag
B. Reader
C. Store
D. Computer network

The store is not a component of an RFID tag.

Chapter - Chapter 12 #26
Gradable: automatic
Learning Outcome: 12.5
Level: Easy

27. What is the order of how RFID works in the supply chain?
(p. 395) A. Manufacturer, store, distribution center, home
B. Home, manufacturer, store, distribution center
C. Distribution center, manufacturer, store, home
D. Manufacturer, distribution center, store, home

Manufacturer, distribution center, store, home is the order of how RFID works in the supply chain.

Chapter - Chapter 12 #27
Gradable: automatic
Learning Outcome: 12.5
Level: Medium

28. Which of the following is a driver of wireless growth?
(p. 384) **A.** Universal access to information and applications
B. The invention of the micro hard drive
C. GIS
D. All of the above

Universal access to information and applications is one of the drivers of wireless growth.

Chapter - Chapter 12 #28
Gradable: automatic
Learning Outcome: 12.5
Level: Medium

29. What are the three technologies influencing business mobility?
(p. 386)
A. Bluetooth, RFID, satellite
B. Bluetooth, security sensor, satellite
C. RFID, satellite, RFID tags
D. Satellite, GPS, GIS

Bluetooth, RFID, and Satellites are influencing business mobility.

Chapter - Chapter 12 #29
Gradable: automatic
Learning Outcome: 12.5
Level: Medium

30. Which company produces the highly successful BlackBerry, the wireless handheld computer now in the hands of more than 1.3 million users worldwide?
(p. 388)
A. Bluetooth
B. Research in Motion (RIM)
C. UPS
D. Apple

RIM produces the highly-successful BlackBerry.

Chapter - Chapter 12 #30
Gradable: automatic
Learning Outcome: 12.3
Level: Medium

31. Which two companies are competing head-to-head with wireless technology?
(p. 402)
A. RIM and UPS
B. UPS and FedEx
C. FedEx and RIM
D. Apple and Microsoft

The closing case discusses how UPS and FedEx are competing head-to-head with wireless technology.

Chapter - Chapter 12 #31
Gradable: automatic
Learning Outcome: 12.3
Level: Easy

32. Which of the following technologies provides nearly universal coverage?
(p. 382)
A. Fixed wireless
B. Satellite
C. DSL
D. T1/T3

Refer to Figure 12.6.

Chapter - Chapter 12 #32
Gradable: automatic
Learning Outcome: 12.3
Level: Easy

33. Which of the following technologies provides highest speed?
(p. 382)
A. Satellite
B. Fibre-to-the-home
C. DSL
D. T1/T3

Refer to Figure 12.6.

Chapter - Chapter 12 #33
Gradable: automatic
Learning Outcome: 12.3
Level: Easy

34. The key advantage of providing data communication links between a company and its suppliers or customers is the sharing of data.
(p. 377)
TRUE

The key advantage of providing data communication links between a company and its suppliers or customers is the sharing of data.

Chapter - Chapter 12 #34
Gradable: automatic
Learning Outcome: 12.1
Level: Medium

35. Skype has long been one of the most popular VoIP options for consumers—largely because of its no cost
(p. 378)
FALSE

Skype has long been one of the most popular VoIP options for consumers—largely because of its low cost

Chapter - Chapter 12 #35
Gradable: automatic
Learning Outcome: 12.1
Level: Medium

36. Medium Capacity is the difference between the highest and the lowest frequencies that can be transmitted on a single medium, and it is a measure of the medium's capacity.
(p. 381)
FALSE

Bandwidth is the difference between the highest and the lowest frequencies that can be transmitted on a single medium, and it is a measure of the medium's capacity.

Chapter - Chapter 12 #36
Gradable: automatic
Learning Outcome: 12.2
Level: Easy

37. The term bandwidth generally refers to high-speed Internet connections transmitting data at speeds greater than 200 kilobytes per second (Kbps), compared to the 56 Kbps maximum speed offered by traditional dial-up connections.
(p. 382)
FALSE

The term broadband generally refers to high-speed Internet connections transmitting data at speeds greater than 200 kilobytes per second (Kbps), compared to the 56 Kbps maximum speed offered by traditional dial-up connections.

Chapter - Chapter 12 #37
Gradable: automatic
Learning Outcome: 12.2
Level: Easy

38. FedEx's famous tracking system, which can find a package's location from its tracking number, uses a wireless courier-management system. *(p. 384)*
TRUE

FedEx's famous tracking system, which can find a package's location from its tracking number, uses a wireless courier-management system.

Chapter - Chapter 12 #38
Gradable: automatic
Learning Outcome: 12.3
Level: Medium

39. A PDA differs from a normal cell phone in that it has an operating system and local storage, so users can add and store data, send and receive email, and install programs to the phone as they could with a smartphone. *(p. 388)*
FALSE

A smartphone differs from a normal cell phone in that it has an operating system and local storage, so users can add and store data, send and receive email, and install programs to the phone as they could with a PDA.

Chapter - Chapter 12 #39
Gradable: automatic
Learning Outcome: 12.3
Level: Medium

40. The global positioning system is owned and operated by the U.S. Department of Defense and is not available for general use around the world. *(p. 391)*
FALSE

The global positioning system is owned and operated by the U.S. Department of Defense but is available for general use around the world.

Chapter - Chapter 12 #40
Gradable: automatic
Learning Outcome: 12.4
Level: Medium

41. Some leading-edge farmers use GPS satellite navigation to map and analyze fields, telling the farmers where to apply the proper amounts of seeds, fertilizer, and herbicides. *(p. 392)*
TRUE

Some leading-edge farmers use GPS satellite navigation to map and analyze fields, telling the farmers where to apply the proper amounts of seeds, fertilizer, and herbicides.

Chapter - Chapter 12 #41
Gradable: automatic
Learning Outcome: 12.4
Level: Medium

42. Common examples of wireless devices include cellular phones and pagers, GPS, and two-way radios. *(p. 384)*
TRUE

Common examples of wireless devices include cellular phones and pagers, GPS, and two-way radios.

Chapter - Chapter 12 #42
Gradable: automatic
Learning Outcome: 12.3
Level: Easy

43. Mobile technology gives users a live (Internet) connection via satellite or radio transmitters.
(p. 385) **FALSE**

Wireless technology gives users a live (Internet) connection via satellite or radio transmitters.

Chapter - Chapter 12 #43
Gradable: automatic
Learning Outcome: 12.3
Level: Easy

44. Wireless means the technology can travel with the user, but it is not necessarily in real-time.
(p. 385) **FALSE**

Mobile means the technology can travel with the user, but it is not necessarily in real-time.

Chapter - Chapter 12 #44
Gradable: automatic
Learning Outcome: 12.3
Level: Easy

45. Mobile means the technology can travel with the user, but it is not necessarily in real-time.
(p. 385) **TRUE**

Mobile means the technology can travel with the user, but it is not necessarily in real-time.

Chapter - Chapter 12 #45
Gradable: automatic
Learning Outcome: 12.3
Level: Easy

46. The term *wireless* refers to any type of electrical or electronic operation that is accomplished without the use of a "hard wired" connection.
(p. 385) **TRUE**

Wireless refers to any type of electrical or electronic operation that is accomplished without the use of a "hard wired" connection.

Chapter - Chapter 12 #46
Gradable: automatic
Learning Outcome: 12.3
Level: Easy

47. The term *mobile* refers to any type of electrical or electronic operation that is accomplished without the use of a "hard wired" connection.
(p. 385) **FALSE**

Wireless refers to any type of electrical or electronic operation that is accomplished without the use of a "hard wired" connection.

Chapter - Chapter 12 #47
Gradable: automatic
Learning Outcome: 12.3
Level: Easy

48. _____ has long been one of the most popular VoIP options for consumers—largely because of its low cost
(p. 378) **Skype**

Chapter - Chapter 12 #48
Gradable: automatic
Learning Outcome: 12.2
Level: Medium

49. Much like data, VoIP traffic can be_____, captured, or modified.
(p. 378) **intercepted**

Chapter - Chapter 12 #49
Gradable: automatic
Learning Outcome: 12.2
Level: Medium

50. _____ is the difference between the highest and the lowest frequencies that can be
(p. 381) transmitted on a single medium, and it is a measure of the medium's capacity.
Bandwidth

Chapter - Chapter 12 #50
Gradable: automatic
Learning Outcome: 12.2
Level: Medium

51. The transportation industry is using _____ devices to help determine current locations and
(p. 384) alternate driving routes.
wireless

Chapter - Chapter 12 #51
Gradable: automatic
Learning Outcome: 12.3
Level: Medium

52. 3G networks are designed for high-speed transmission of _____ and voice.
(p. 387) **multimedia data**

Chapter - Chapter 12 #52
Gradable: automatic
Learning Outcome: 12.3
Level: Medium

53. _____ are small, handheld computers capable of entirely digital
(p. 387) communications transmission.
Personal digital assistants (PDA)

Chapter - Chapter 12 #53
Gradable: automatic
Learning Outcome: 12.3
Level: Medium

54. A _____ differs from a normal cell phone in that it has an operating system and
(p. 388) local storage, so users can add and store data, send and receive email, and install programs to the phone as they could with a PDA.
smartphone

Chapter - Chapter 12 #54
Gradable: automatic
Learning Outcome: 12.3
Level: Medium

55. _____ are wireless mobile content services that provide location-specific data
(p. 390) to mobile users moving from location to location
Location-based services (LBS)

Chapter - Chapter 12 #55
Gradable: automatic
Learning Outcome: 12.4
Level: Medium

56. _____ is the capability of two or more computer systems to share data and resources, even
(p. 378) though they are made by different manufacturers.
Interoperability

Chapter - Chapter 12 #56
Gradable: automatic
Learning Outcome: 12.1
Level: Easy

57. A _____ area network (MAN) is a computer network that provides connectivity in a
(p. 377) geographic area or region larger than that covered by a local area network, but smaller than the area covered by a wide area network.
Metropolitan

Chapter - Chapter 12 #57
Gradable: automatic
Learning Outcome: 12.1
Level: Easy

58. _____ fidelity is a means of linking computers using infrared or radio signals.
(p. 393) **Wireless**

Chapter - Chapter 12 #58
Gradable: automatic
Learning Outcome: 12.5
Level: Easy

59. _____ technology means the technology can travel with the user, but it is not necessarily in real-time.
(p. 385) **Mobile**

Chapter - Chapter 12 #59
Gradable: automatic
Learning Outcome: 12.5
Level: Easy

60. _____ technology gives users a live connection via satellite or radio transmitters.
(p. 385) **Wireless**

Chapter - Chapter 12 #60
Gradable: automatic
Learning Outcome: 12.5
Level: Easy

61. _____ is an omnidirectional wireless technology that provides limited-range voice and data transmission over the unlicensed 2.4-GHz frequency band, allowing connections with a wide variety of fixed and portable devices that normally would have to be cabled together.
(p. 389) **Bluetooth**

Chapter - Chapter 12 #61
Gradable: automatic
Learning Outcome: 12.3
Level: Easy

62. Radio frequency identification tags have the potential to reinvent the _____ chain.
(p. 397) **Supply**

Chapter - Chapter 12 #62
Gradable: automatic
Learning Outcome: 12.5
Level: Medium

63. The three components of an RFID system include the tag, _____, and computer network.
(p. 397) **Reader**

Chapter - Chapter 12 #63
Gradable: automatic
Learning Outcome: 12.5
Level: Medium

64. RFID in the retail supply chain includes the manufacturer, distribution center, store, and _____.
(p. 397) **Home**

Chapter - Chapter 12 #64
Gradable: automatic
Learning Outcome: 12.5
Level: Medium

65. Microwave _____ are commonly used to transmit network signals over great distances.
(p. 389) **Transmitters**

Chapter - Chapter 12 #65
Gradable: automatic
Learning Outcome: 12.4
Level: Easy

66. A global _____ system is a device that determines current latitude, longitude, speed, and direction of movement.
(p. 391) **Positioning**

Chapter - Chapter 12 #66
Gradable: automatic
Learning Outcome: 12.4
Level: Easy

67. A _____ information system is designed to work with information that can be shown on a map.
(p. 391)
Geographic

Chapter - Chapter 12 #67
Gradable: automatic
Learning Outcome: 12.4
Level: Easy

68. Compare LANs, WANs, and MANs.
(p. 377)

Local Area Network (LAN)-connects network devices over a relatively short distance. A networked office building, school, or home usually contains a single LAN, though sometimes one building will contain a few small LANs, and occasionally a LAN will span a group of nearby buildings. Wide Area Network (WAN)-is a geographically dispersed telecommunications network. A WAN like the Internet spans most of the world. A wide area network is a geographically dispersed telecommunications network. A wide area network may be privately owned or rented, but the term usually implies the inclusion of public (shared user) networks. Metropolitan Area Network (MAN)-interconnects users with computer resources in a geographic area or region larger than that covered by even a large local area network, but smaller than the area covered by a wide area network.

Chapter - Chapter 12 #68
Gradable: manual
Learning Outcome: 12.1
Level: Easy

69. Explain how a wireless device can help an organization perform business anywhere, anyplace, anytime.
(p. 384)

A wireless device provides users with a live (Internet) connection via satellite or radio transmitters. If an organization uses wireless technologies its employees, customers, and suppliers will have a live connection to organizational information and applications anytime, anywhere, and anyplace.

Chapter - Chapter 12 #69
Gradable: manual
Learning Outcome: 12.3
Level: Easy

70. Describe RFID and how it can be used to help make a supply chain more effective.
(p. 395-398)

Radio frequency identification (RFID) technologies use active or passive tags in the form of chips or smart labels that can store unique identifiers and relay this information to electronic readers. RFID tags contain a microchip and an antenna, and typically work by transmitting a serial number via radio waves to an electronic reader, which confirms the identity of a person or object bearing the tag. RFID tags will be added to every product and shipping box. At every step of an item's journey, a reader scans one of the tags and updates the information on the server. Manufactures and retailers can observe sales patterns in real time and make swift decisions about production, ordering, and pricing. Integrating RFID in the supply chain will change the way a companies operate from managing maintenance, combating theft, to augmenting Sarbanes-Oxley initiatives.

Chapter - Chapter 12 #70
Gradable: manual
Learning Outcome: 12.5
Level: Easy

71. List and discuss the key factors inspiring the growth of wireless technologies.
(p. 383)

Wireless growth is occurring because of: Universal access to information and applications; the automation of business processes; user convenience, timeliness, and ability to conduct business 24X7X365.

Chapter - Chapter 12 #71
Gradable: manual
Learning Outcome: 12.3
Level: Easy

72. Describe the business benefits associated with enterprise mobility.
(p. 383-384)

Wireless devices are enabling employees to be more efficient and effective; however wireless devices are also making it more difficult to divide work from nonwork. Over the last 10 to 15 years employees have seen a steady erosion of their personal time as their work day lengthens.

Chapter - Chapter 12 #72
Gradable: manual
Learning Outcome: 12.5
Level: Easy

73. Discuss and differentiate the different generations of mobile communications technologies.
(p. 387)

PCS are second-generation (2G) mobile communications technology, and analog cellular systems are first generation (1G). Second-generation cellular networks are circuit-switched digital networks that can transmit data at about 10 kilobits per second (Kbps), which is extremely slow. Third-generation (3G) networks use a newer packet-switched technology that is much more efficient (and hence faster) than dedicated circuit-switched networks. Third-generation networks have speeds ranging from 120 to 144 Kbps for mobile users in, for example, a car, and up to 2 gigabits per second (Gbps) for stationary users. These 3G networks are designed for high-speed transmission of multimedia data and voice. The major network operators are providing 3G services, and some groups and companies have already started working on fourth-generation (4G) mobile phone system. The 4G technology will take mobile communication another step up to integrate radio and television transmissions, and to consolidate the world's phone standards into one high-speed technology.

Chapter - Chapter 12 #73
Gradable: manual
Learning Outcome: 12.3
Level: Medium

74. List and discuss concerns about a number of privacy issues associated with Location-based services (LBS)
(p. 391-392)

A user that employs location-based services on a regular basis faces a potential privacy problem. Many users consider location data to be highly sensitive and are concerned about a number of privacy issues, including:

Target marketing: Mobile users' locations can be used to classify customers for focused marketing efforts.
Embarrassment: One customer's knowledge of another's location may lead to embarrassing situations.
Harassment: Location data can be used to harass or attack a user.
Service denial: A health insurance firm might deny a claim if it learned that a user visited a high-risk area.
Legal restrictions: Some countries regulate the use of personal data.
Unlike other data in cyberspace, location data has the potential to allow an adversary to physically locate a person, and therefore most wireless subscribers have legitimate concerns about their personal safety if such data fell into the wrong hands. Laws and rules of varying clarity, offering different degrees of protection, have been or are being enacted in Canada, the United States, the European Union, and Japan.

Chapter - Chapter 12 #74
Gradable: manual
Learning Outcome: 12.4
Level: Medium

75. Distinguish between mobile and wireless technologies.
(p. 384)

The terms *mobile* and *wireless* are often used synonymously, but actually denote two different technologies.
Mobile means the technology can travel with the user, but not necessarily in real time; users can download software, email messages, and Web pages onto their smartphone, laptop, or other mobile device for portable reading or reference. Data collected while on the road can be synchronized with a PC or corporate server.
Wireless, on the other hand, refers to any type of electrical or electronic operation that is accomplished without the use of a "hard wired" connection.

Chapter - Chapter 12 #75
Gradable: manual
Learning Outcome: 12.5
Level: Medium

12 Summary

Category	*# of Questions*
Chapter - Chapter 12	75
Gradable: automatic	67
Gradable: manual	8
Learning Outcome: 12.1	12
Learning Outcome: 12.2	9
Learning Outcome: 12.3	27
Learning Outcome: 12.4	10
Learning Outcome: 12.5	17
Level: Easy	42
Level: Medium	33