



DATA COMMUNICATIONS

LECTURE 6 / COMMUNICATION MEDIA AND DEVICES



اللهم صل على محمد وعلى آل محمد، كما صليت على إبراهيم وعلى آل إبراهيم
إنك حميد مجيد، اللهم بارك على محمد وعلى آل محمد كما باركت على إبراهيم
وعلى آل إبراهيم إنك حميد مجيد

AMR SHOUKRY

[ANSWERED]

- 1) transmits data over communication lines such as telephone and cables.
 - a) Data communication system *
 - b) Network(Slide 4)
- 2) uses communication equipment to connect two or more computers and their resources.
 - a) Data communication system
 - b) Network *(Slide 4)
- 3) What is needed for successful communications?
 - a) Sending device
 - b) Communications device
 - c) Communications channel
 - d) another Communications device
 - e) Receiving device
 - f) All of the above *(Slide 5)
- 4) accepts transmission of data, instructions, or information
 - a) Sending device
 - b) Communications device
 - c) Communications channel
 - d) Receiving device *(Slide 5)
- 5) media on which data, instructions, or information travel
 - a) Sending device
 - b) Communications device
 - c) Communications channel *
 - d) Receiving device(Slide 5)
- 6) connects the communications channel to the receiving device
 - a) Sending device
 - b) Communications device *
 - c) Communications channel
 - d) Receiving device(Slide 5)

7) connects the sending device to the communications channel

- a) Sending device
- b) Communications device *
- c) Communications channel
- d) Receiving device

(Slide 5)

8) initiates instruction to transmit data, instructions, or information

- a) Sending device *
- b) Communications device
- c) Communications channel
- d) Receiving device

(Slide 5)

9) computer or a specialized communication device

- a) Sending and receiving devices *
- b) Communication channel
- c) Data transmission specifications
- d) Connection devices

(Slide 7)

10) carries the message

- a) Sending and receiving devices
- b) Communication channel *
- c) Data transmission specifications
- d) Connection devices

(Slide 7)

11) rules and procedures that coordinate the sending and receiving devices

- a) Sending and receiving devices
- b) Communication channel
- c) Data transmission specifications *
- d) Connection devices

(Slide 7)

12) convert outgoing messages into packets that can travel cross the communication channel

- a) Sending and receiving devices
- b) Communication channel
- c) Data transmission specifications
- d) Connection devices *

(Slide 7)

13) Networks are comprised of at least ... end stations, and a medium over which data can be carried.

- a) 0
- b) 1
- c) 2 *
- d) 3

(Slide 9)

14) Guided media

- a) Wired *
- b) Wireless

(Slide 9)

15) Unguided media

- a) Wired
- b) Wireless *

(Slide 9)

16) signals propagate in solid media: copper, fiber, coax

- a) Wired *
- b) Wireless

(Slide 9)

17) signals propagate freely

- a) Wired
- b) Wireless *

(Slide 9)

18) copper

- a) Wired *
- b) Wireless

(Slide 9)

19) fiber

- a) Wired *
- b) Wireless

(Slide 9)

20) radio

- a) Wired
- b) Wireless *

(Slide 9)

- 21) **coax**
a) Wired *
b) Wireless
(Slide 9)
- 22) **propagates between transmitter/receiver pairs**
a) Physical link
b) Bit *
(Slide 9)
- 23) **what lies between transmitter & receive**
a) Physical link *
b) Bit
(Slide 9)
- 24) **Connects your TV to the cable TV system**
a) Twisted Pair
b) Coaxial cables *
c) Fiber Optics
(Slide 11-13)
- 25) **Consist of two separate insulated copper wires that twisted together**
a) Twisted Pair *
b) Coaxial cables
c) Fiber Optics
(Slide 11-13)
- 26) **Glass or plastic fibers carrying light pulses, each pulse a bit**
a) Twisted Pair
b) Coaxial cables
c) Fiber Optics *
(Slide 11-13)
- 27) **It uses light rather than electricity**
a) Twisted Pair
b) Coaxial cables
c) Fiber Optics *
(Slide 11-13)

- 28) Consist of a single copper wire surrounded by at least three layers: (1) an insulating material, (2) a woven or braided metal, and (3) a plastic outer coating.
- a) Twisted Pair
 - b) Coaxial cables *
 - c) Fiber Optics
- (Slide 11-13)
- 29) In Twisted Pair wire pairs are ...
- a) expensive
 - b) inexpensive *
- (Slide 11)
- 30) They are often used because they have already been installed in a building (network cabling) and telephone systems.
- a) Twisted Pair *
 - b) Coaxial cables
 - c) Fiber Optics
- (Slide 11-13)
- 31) 100 Mbps, 1 Gbps Ethernet
- a) Category 5 *
 - b) Category 6
- (Slide 11)
- 32) 10 Gbps Ethernet
- a) Category 5
 - b) Category 6 *
- (Slide 11)
- 33) high-speed point-to-point transmission (10's-1000's Gbps)
- a) Twisted Pair
 - b) Coaxial cables
 - c) Fiber Optics *
- (Slide 11-13)
- 34) More expensive
- a) Twisted Pair
 - b) Coaxial cables
 - c) Fiber Optics *
- (Slide 11-13)

35) **immune to electromagnetic noise**

- a) Twisted Pair
- b) Coaxial cables
- c) Fiber Optics *

(Slide 11-13)

36) **repeaters spaced far apart**

- a) Twisted Pair
- b) Coaxial cables
- c) Fiber Optics *

(Slide 11-13)

37) **high speed operation**

- a) Twisted Pair
- b) Coaxial cables
- c) Fiber Optics *

(Slide 11-13)

38) **low error rate**

- a) Twisted Pair
- b) Coaxial cables
- c) Fiber Optics *

(Slide 11-13)

39) **Signal carried in various "bands" in electromagnetic spectrum**

- a) wired
- b) wireless radio *

(Slide 14)

40) **No physical "wire"**

- a) wired
- b) wireless radio *

(Slide 14)

41) **Wireless radio: Broadcast, "half-duplex" (sender to receiver)**

- a) T *
- b) F

(Slide 14)

42) Propagation environment effects:

- a) Reflection
- b) Obstruction by objects
- c) Interference/noise
- d) All of the above *

(Slide 14)

43) 10's Mbps over —10 Km

- a) Wireless LAN (WiFi)
- b) Wide-area *
- c) Bluetooth
- d) IrDA
- e) Terrestrial microwave
- f) Satellite

(Slide 14)

44) 10-100's Mbps, 10's of meters

- a) Wireless LAN (WiFi) *
- b) Wide-area
- c) Bluetooth
- d) IrDA
- e) Terrestrial microwave
- f) Satellite

(Slide 14)

45) point-to-point; 45 Mbps

- a) Wireless LAN (WiFi)
- b) Wide-area
- c) Bluetooth
- d) IrDA
- e) Terrestrial microwave *
- f) Satellite

(Slide 14)

46) direct line-of-sight, TV remote • 2 m, 2.4 kbit/s to 1 Gbit/s

- a) Wireless LAN (WiFi)
- b) Wide-area
- c) Bluetooth
- d) IrDA *
- e) Terrestrial microwave
- f) Satellite

(Slide 14)

47) up to 45 Mbps • 270 msec end-end delay

- a) Wireless LAN (WiFi)
 - b) Wide-area
 - c) Bluetooth
 - d) IrDA
 - e) Terrestrial microwave
 - f) Satellite *
- (Slide 14)

48) cable replacement • short distances (10 meters), limited rates (up to 25Mbps)

- a) Wireless LAN (WiFi)
 - b) Wide-area
 - c) Bluetooth *
 - d) IrDA
 - e) Terrestrial microwave
 - f) Satellite
- (Slide 14)

49) 4G cellular

- a) Wireless LAN (WiFi)
 - b) Wide-area *
 - c) Bluetooth
 - d) IrDA
 - e) Terrestrial microwave
 - f) Satellite
- (Slide 14)

50) Microwaves are radio waves that provide a high-speed signal transmission.

- a) T *
 - b) F
- (Slide 15)

51) Use as line-of-sight transmission of data signals via atmosphere

- a) Terrestrial microwave *
 - b) Physical cable
- (Slide 16)

52) Terrestrial microwave: Often antennas in high places, such as the tops of mountains and buildings-are positioned at points approximately 30 miles apart to continue the transmission.

- a) T *
 - b) F
- (Slide 16)

- 53) Microwave transmission offers high speed, cost-effectiveness and ease implementation.
a) T *
b) F
(Slide 16)
- 54) One problem is susceptibility to interference by weather conditions.
a) Terrestrial microwave *
b) Physical cable
(Slide 16)
- 55) Satellite transmission is a form of microwave transmission in which a satellite acts as the relay station
a) T *
b) F
(Slide 17)
- 56) Its basic components are earth stations, which send and receive signals
a) Satellite transmission *
b) Physical cable
(Slide 17)
- 57) is the satellite components that receive the transmission from an earth.
a) Transceiver
b) Transponder *
c) Transposer
d) Translation
(Slide 17)
- 58) This entire process takes only a
a) second
b) fraction of a second *
(Slide 17)
- 59) A communications satellite is a space station that receives microwave signals from an earth-based station, amplifies it, and broadcasts the signal over a wide area.
a) T *
b) F
(Slide 18)

60) Twisted copper wire, used for standard telephone lines and Ethernet cables

- a) Twisted pair *
 - b) Coaxial cable
 - c) Fiber-optic cable
 - d) Infrared
 - e) Radio frequency
 - f) Microwave
 - g) Satellite
- (Slide 19)

61) Microwave relay station in the sky, used by GPS devices

- a) Twisted pair
 - b) Coaxial cable
 - c) Fiber-optic cable
 - d) Infrared
 - e) Radio frequency
 - f) Microwave
 - g) Satellite *
- (Slide 19)

62) Radio waves connect wireless devices including cell phones and computer components

- a) Twisted pair
 - b) Coaxial cable
 - c) Fiber-optic cable
 - d) Infrared
 - e) Radio frequency *
 - f) Microwave
 - g) Satellite
- (Slide 19)

63) Light carries data, more than 26,000 times the capacity of twisted pair

- a) Twisted pair
 - b) Coaxial cable
 - c) Fiber-optic cable *
 - d) Infrared
 - e) Radio frequency
 - f) Microwave
 - g) Satellite
- (Slide 19)

64) Solid copper core, more than 80 times the capacity of twisted pair

- a) Twisted pair
 - b) Coaxial cable *
 - c) Fiber-optic cable
 - d) Infrared
 - e) Radio frequency
 - f) Microwave
 - g) Satellite
- (Slide 19)

65) Infrared light travels in a straight line

- a) Twisted pair
 - b) Coaxial cable
 - c) Fiber-optic cable
 - d) Infrared *
 - e) Radio frequency
 - f) Microwave
 - g) Satellite
- (Slide 19)

66) High-frequency radio waves, travels in straight line through the air

- a) Twisted pair
 - b) Coaxial cable
 - c) Fiber-optic cable
 - d) Infrared
 - e) Radio frequency
 - f) Microwave *
 - g) Satellite
- (Slide 19)

67) A ... is any type of hardware capable of transmitting data, instructions, and information between a sending device and a receiving device

- a) sender
 - b) receiver
 - c) channel
 - d) communications device *
- (Slide 21)

68) Modem stands for MODulator/DEModulator

- a) T *
 - b) F
- (Slide 23)

69) A modem is a device that converts

- a) a digital signal to analog signal
- b) an analog signal digital to signal
- c) Both of them *

(Slide 23)

70) Most modems are directly connected to phone system by a cable.

- a) T *
- b) F

(Slide 23)

71) A wireless modem uses the cell phone network to connect to the Internet wirelessly from a notebook computer, a smart phone, or other mobile device

- a) T *
- b) F

(Slide 24)

72) Computer A sends data to the hub and then the hub broadcast the data to all the computers attached to the hub. Computer B then receives the data and other computers ignore the data.

- a) T *
- b) F

(Slide 25)

73) Hub is intelligent

- a) T
- b) F *

(Slide 25)

74) Hub has high cost

- a) T
- b) F *

(Slide 25)

75) A network card enables a computer or device to access a network

- a) T *
- b) F

(Slide 26)

76) Wireless network cards often have an antenna.

- a) T *
- b) F

(Slide 26)

77) NIC stores the ... address of the computer.

- a) CAM
- b) MCA
- c) CMA
- d) MAC *

(Slide 26)

78) NIC

- a) Internal NIC
- b) External NIC
- c) Both of them *

(Slide 26)

79) is connected via USB or by wireless connection to the computer.

- a) Internal NIC
- b) External NIC *

(Slide 26)

80) is attached to the motherboard and it is connected to the RJ45 cable.

- a) Internal NIC *
- b) External NIC

(Slide 26)

81) The bridge is a device that connects two similar LAN's.

- a) T *
- b) F

(Slide 27)

82) The principal function of a network bridge is to forward data based on the MAC address of the sending and receiving devices.

- a) T *
- b) F

(Slide 27)

83) The switch sends a message from the sender to the receiver.

- a) private *
- b) public

(Slide 28)

- 84) It stores the MAC address of all the connected devices and upon receiving a message from the sender it first checks the MAC address of the message and then sends the message to the receiver that matches the MAC address.
a) Hub
b) Switch *
(Slide 28)
- 85) A router routes/forwards data packets based on their
a) bandwidth
b) IP addresses *
(Slide 29)
- 86) Routers connect Local Area Network (LANs) and Wide Area Network (WANs) together
a) T *
b) F
(Slide 29)
- 87) Routers Dynamically updating routing table based on which they make decisions on routing the incoming packets
a) T *
b) F
(Slide 29)
- 88) A is a network security system that determines which data packets are allowed to access the network.
a) gateway
b) firewall *
(Slide 30)
- 89) A is a piece of networking hardware or a network node that allows two separate networks to communicate with one another.
a) gateway *
b) firewall
(Slide 30)
- 90) Computers and routers are the most typical
a) gateways *
b) firewalls
(Slide 30)

91) A wireless access point is a central communications device that allows computers and devices to transfer data wirelessly among themselves or to a wired network.

a) T *

b) F

(Slide 31)

لا تنسوننا من صالح دعائكم

اللهم صل على محمد وعلى آل محمد، كما صليت على إبراهيم وعلى آل إبراهيم
إنك حميد مجيد، اللهم بارك على محمد وعلى آل محمد كما باركت على إبراهيم
وعلى آل إبراهيم إنك حميد مجيد

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