Q.59. What is meant by encoding of data?

Computer works only with binary numbers. It stores all types of data in the form binary digits. The data is converted to binary form before it is stored inside the computer. The process of converting data into binary form is known as encoding. Data can be converted into binary form by using different coding schemes.

Multiple Choice

1. The process of transferring data electronically from one place to another is called:
   - a. Data processing
   - b. Data Communication
   - c. Data sequencing
   - d. Data Sender

2. All of the following are elements of data communication system EXCEPT.
   - a. Sender
   - b. Receiver
   - c. Medium
   - d. Voltage

3. What is required to send data, instructions or information?
   - a. Sending device
   - b. Receiving device
   - c. Both a & b
   - d. None

4. Physical path that connects the source and receiver is known as:
   - a. Communication Channel
   - b. Decoder
   - c. Encoder
   - d. Self-testing

5. The electromagnetic or light waves representing data are called:
   - a. Information
   - b. Signal
   - c. Sender
   - d. None

6. The number of times a wave repeats during a specific time interval is called:
   - a. Pulse
   - b. Amplitude
   - c. Frequency
   - d Oscillation

7. The height of wave within a given period of time is known as:
   - a. Frequency
   - b. Amplitude
   - c. Oscillation
   - d. Pulse

8. The chart, graph, pictures and freehand drawing are examples of:
   - a. Image data
   - b. Audio data
   - c. Numeric data
   - d. Text data

9. The music and speech represent:
   - a. Image
   - b. Text
   - c. Numeric
   - d. Audio

10. Which of the following type of data is used to display actions and movement?
    - a. Audio
    - b. Video
    - c. Image
    - d. Text

11. Which type of data consists of words, sentences and paragraphs?
    - a. Text
    - b. Audio
    - c. Numeric
    - d Video

12. Which of the following coding scheme uses 4-bit code?
    - a. ASCII
    - b. EBCDIC
    - c. BCD
    - d. Unicode

13. Which of the following coding scheme used by IBM?
    - a. ASCII
    - b. EBCDIC
    - c. BCD
    - d. Unicode

14. How many characters ASCII 7-bit code can represent?
    - a. 128
    - b. 256
    - c. 500
    - d.364

15. How many characters in ASCII 8-bit code can represent?
    a. 128 characters
    b. 256 characters
    c. 500 characters
    d.364 characters
16. Unicode is a :
    a. 16-bit code
    b. 32-bit code
    c. 64-bit code
    d.132-bit code
17. How many characters can Unicode represent?
    a. 65536 characters
    b. 10000 characters
    c. 15000 characters
    d. None
18. Communication mode is:
    a. LAN
    b. Internet
    c. Full-duplex
    d. All
19. Transmission permitting data to move only one way at a time is called:
    a. Half-duplex
    b. Simplex
    c. Full-duplex
    d. Start/stop
20. An arrangement in which data can be received and sent simultaneously is called:
    a. Simples
    b. Full-duplex
    c. Half-duplex
    d. Multi-duplex
21. A telephone conversation is an example of:
    a. Full-duplex transmission
    b. Half-duplex transmission.
    c. Simplex transmission.
    d. Asynchronous transmission.
22. Television and radio broadcasts are examples of:
    a. Full-duplex transmission
    b. Half-duplex transmission
    c. Simplex transmission
    d. None
23. Internet surfing is an example of:
    a. Simplex
    b. Half duplex
    c. Full duplex
    d. None
24. Which transmission allows data to travel in both directions but only one direction at a time?
    a. Simplex
    b. Half Duplex
    c. Full Duplex
    d. Reverse Duplex
25. Full-duplex communication is made possible by devices called:
    a. Multiplexer
    b. Modem
    c. Keyboard
    d. Mouse
26. Which of the following is the fastest communication mode?
    a. Half duplex
    b. Full duplex
    c. Simple
    d. None
27. The internal transfer of data in a computer uses:
    a. Parallel mode
    b. Serial mode
    c. Both and b
    d. None
28. Which of the following devices uses parallel transmission?
    a. Printer
    b. Keyboard
    c. Mouse
    d. None
29. Most data transmitted over telephone lines uses:
    a. Serial transmission
    b. Parallel transmission
    c. Both a and b
    d. None
30. Which of the following is comprised of individual electrical pulses that represent the bits grouped together into bytes?
    a. Communications device
    b. Digital signal
    c. Analog signal
    d. Sending device

31. Analog signal is measured in:
    a. Volt   b. Hertz   c. Digits   d. WATTS
32. Sound, light and radio waves are examples of:
    a. Digital signal   b. Analog signal
    c. Simple signals   d. None
33. Data is transmitted block by block in:
    a. Synchronous transmission
    b. Digital transmission
    c. Asynchronous transmission
    d. Analog transmission
34. Which transmission type transmits data one character at a time, with the sender and receiver not synchronized with each other?
    a. Synchronous   b. Ethernet
    c. Asynchronous   d. None
35. This type of transmission is sometimes called start/stop transmission.
    a. Asynchronous   b. Intermittent
    c. Synchronous   d. Pulse
36. Start/stop bits are not required in this type of transmission.
    a. Asynchronous   b. Pulse
    c. Intermittent   d. Synchronous
37. Which data transmission type uses a clock to control the timing of bits being sent?
    a. Synchronous   b. Asynchronous
    c. Parallel   d. None
38. Which of the following technique uses modulation?
    a. Bandwidth   b. Broadband
    c. Baseband   d. None
39. A communication technique to transmit large volume of data over long distance is:
    a. Baseband   b. Broadband
    c. Bandwidth   d. None
40. The communication channels can be divided into:
    a. Two types   b. Four types   c. Seven types   d. None
41. Which of the following transmission media is used in LAN?
    a. Satellite   b. Microwave
    c. Coaxial cable   d. None
42. An important property of fiber optic cable is:
    a. Noise   b. Reflection
    c. Interference   d. Attenuation
43. The diameter of fiber optical cable is:
    a. 62.5 cm   b. 62.5 microns
    c. 62.5 m   d. 62.5 mm
44. Which of the following can severally affect the quality of satellite transmission?
    a. Bad weather   b. Mountains
    c. Light rays   d. Moon
45. The time taken by a data signal to reach to moon and then back to earth was about:
    a. 2 minutes   b. 2-second   c. 2 ms   d. 2 hours

46. Microwave transmission, coaxial cables and fiber optics are examples of:
    a. Modems
    b. Routers
    c. Transmission Media
    d. Ring networks
47. Which of the following consists of thin glass to transmit beams of light?
    a. Twisted pair
    b. Coaxial cable
    c. Fiber-optic cable
    d. None
48. Which of the following transmits voice and data through air as high-frequency radio waves?
    a. Twisted pair
    b. Coaxial cable
    c. Fiber-optic cable
    d. Microwave
49. All of the following are guided communications media EXCEPT:
    a. Twisted pair
    b. Fiber-optic cables
    c. Coaxial cables
    d. Satellite
50. Select unguided media:
    a. Twisted pair
    b. Co-axial
    c. Satellite
    d. Fiber optic
51. Which of the following is not a communication media?
    a. Twisted Pair
    b. UTP
    c. Microwave
    d. Modem
52. Which of the following is comprised of two separate insulated copper wires that are twisted together?
    a. Fiber optics
    b. Twisted-pair wire
    c. Submarine
    d. Coaxial cables
53. Which communications medium requires line-of-sight?
    a. Microwave
    b. Fiber optic
    c. Twisted pair
    d. Coaxial
54. Modem stands for:
    a. Modification/demodification
    b. Modulation/demodulation
    c. Mode/Modeless
    d. None
55. Which is the correct measurement of a modem's data transfer rate?
    a. Kbps
    b. Gbps
    c. bps
    d. Mbps
56. A communications signal in the form of a continuous wave is called:
    a. Digital
    b. Modulation
    c. Analog
    d. None
57. The process of converting from analog to digital signal is known as:
    a. Modulation
    b. Data routing
    c. Data sequencing
    d. Demodulation
58. Which kind of signal is mostly required by telephone lines?
    a. Digital
    b. Analog
    c. Both
    d. None
59. Converting a digital signal to an analog signal is called:
    a. Modulation
    b. Demodulation
    c. Conversion
    d. None
60. Signals produced by a computer to send over phone line must be converted to:
    a. Modems
    b. Analog signals
    c. Digital signals
    d. Microwaves

61. Modulation needs to be done:
    a. Prior to sending a digital signal over the telephone line
    b. Prior to receiving a signal from the telephone line
    c. Whenever a signal's frequency needs to be increased.
    d. Whenever a signal's amplitude needs to be manipulated.

62. A modem's rating of 56K refers to its:
    a. Memory size
    b. Transmission speed
    c. Modem Size
    d. None.

63. Which is an advantage of synchronous over asynchronous transmission?
    a. Simplicity
    b. Speed
    c. No error checking
    d. Two-way communications

64. A modem:
    a. Derives its name from modulator-demodulator
    b. Converts digital signals into analog signals
    c. Converts analog signals into digital signals
    d. All of the above

65. Which of the following features is provided with a modem?
    a. Speeds
    b. Self-testing
    c. Transmission rate
    d. All

66. Bps is short for:
    a. Baud per second
    b. bytes per second
    c. Bits per second
    d. binary packets a second

67. A modem allows computers to access other computers through all of the following types of connections EXCEPT:
    a. Wireless
    b. Telephone lines
    c. Offline
    d. Cable.

68. Which modem is used to transmit data signals through air instead of cable?
    a. Internal modem
    b. Wireless modem
    c External modem
    d. None

69. Which type of modem can be added to the system unit through expansion slot?
    a. External modem
    b. Internal modem
    c. Wireless modem
    d. None

70. Which of the following is not a common communication code?
    a. Unicode
    b. EBCDIC
    c. Bilateral code
    d. ASCII

71. Communication between a computer and keyboard involves:
    a. simplex
    b. Half-duplex
    c. Full-duplex
    d. All

72. BCD stands for:
    a. Binary coded decimal
    b. Base coded decimal
    c. Byte coded decimal
    d. Bidirectional coded decimal

73. IBM stands for:
    a. International Business machine
    b. Internet Business Machine
    c. Internet Bulletin Machine
    d. International Binary Machine

74. BCD Code is a _____ bit code.
   a. 4   b. 8   c. 15   d. 32
75. _____ code is 7-bit or 8-bit code.
   a. BCD   b. EBCDIC   c. ASCII   d. None
76. EBCDIC is a _____ bit code.
   a. 4-bit   b. 6-bit   c. 7-bit   d. 8-bit
77. EBCDIC stands for:
   a. Extended Binary Coded Decimal Interchange Code
   b. Extended Bit Code Decimal Interchange Code
   c. Extended Bit Case Decimal Interchange Code
   d. Extended Binary Case Decimal Interchange Code
78. ASCII stands for:
   a. American Stable Code for International Interchange
   b. American Standard Case for Institutional Interchange
   c. American Standard Code for Information Interchange
   d. American Standard Code for Interchange Information
79. Example of non numerical data is:
   a. Employee address   b. Examination score
   c. Bank balance   d. Student Roll No
80. The term baud is measured of:
   a. Speed at which data travels over communication line
   b. Memory capacity
   c. Instruction execution time
   d. All
81. A large number of computer in wide geographical area can be efficiently connected by:
   a. Twisted pair   b. Coaxial cable
   c. Communication Satellite   d. None

Answers

1.	b	2.	d	3.	a	4.	a	5.	b	6.	c
7.	b	8.	a	9.	d	10.	b	11.	a	12.	c
13.	b	14.	a	15.	b	16.	a	17.	a	18.	c
19.	a	20.	b	21.	a	22.	c	23.	b	24.	b
25.	a	26.	b	27.	a	28.	a	29.	a	30.	b
31.	a	32.	b	33.	a	34.	c	35.	a	36.	d
37.	a	38.	b	39.	b	40.	a	41.	c	42.	b
43.	b	44.	a	45.	b	46.	c	47.	c	48.	d
49.	d	50.	c	51.	d	52.	b	53.	a	54.	b
55.	c	56.	c	57.	d	58.	b	59.	a	60.	b
61.	a	62.	b	63.	b	64.	d	65.	d	66.	b
67.	c	68.	b	69.	b	70.	c	71.	a	72.	a
73.	a	74.	a	75.	c	76.	d	77.	a	78.	c
79.	a	80.	a	81.	c						

Fill in the Blanks

1. In _____ transmission, a stat bit and a stop bit frame a character byte
2. Data communication signals can be in _____ or _____ form.
3. Modem is an electronic device that converts digital signal into analog signals, which is called _____
4. The _____ transmission involves the concurrent flow of bits of data through separate communication lines
5. ASCII is _____ bits code.
6. A television broadcast is an example of _____ transmission.
7. In _____ transmission data is transmitted by character by character.
8. The data is transmitted in both directions simultaneously on same channel
9. Fiber optic is better for very high speed, high-capacity data transmission than _____ cable because of lack of attenuation and purity of the signal
10. The number of frequencies that can fit on a link at one time is called _____
11. _____ is a process of transferring data electronically from place to another place
12. A _____ that creates the message to be transmitted.
13. Source is also called _____
14. Message is transmitted from one place to another through _____

Answers

1.	asynchronous	2.	digital, analog	3.	modulation
4.	parallel	5.	7 (seven)	6.	simplex
7.	asynchronous	8.	full duplex	9.	coaxial
10.	bandwidth	11.	Data Communication	12.	Sender
13.	Sender	14.	Medium		

True / False

1. An internal modem is a circuit board that can be added to system unit of computer
2. In full transmission, the channel capacity is shared by both communication devices at all time.
3. Normally, modem transmission is asychronous.
4. Transmission of signals across communication medium is called signaling
5. The voice channel has a bandwidth of 0-233 KHz
6. Sychronous transmission is much faster than asychronous

Answers

1.	T	2.	T	3.	T	4.	F	5.	F	6.	T