

UNIT-I

1. The frequency components in a spectrum of digital signals are (a)
(a) Infinite (b) 1000 (c) 100 (d) 10
2. More information is said to contain in (a)
(a) Unlikely event (b) likely event (c) Neutral event (d) None of the above
3. Baud rate is defined as (b)
(a) No. of bits/sec (b) No. of signaling elements/sec (c) No. of cycles/sec
(d) None of the above
4. Which encoding method uses alternating positive and negative values for 1's (d)
(a) NRZ-L (b) RZ (c) MANCHESTER (d) AMI
5. In asynchronous communication the gap time between bytes is (b)
(a) Fixed (b) Variable (c) A function of data rate (d) Zero
6. Synchronous transmission does not have (d)
(a) A start bit (b) A stop bit (c) Gaps between bytes (d) All of the above
7. Which of the following modulation techniques are used by MODEMS? (d)
(a) 16-QAM (b) FSK (c) 8-PSK (d) All of the above
8. The OSI model consists of (c)
(a) 3 layers (b) 5 layers (c) 7 layers (d) 8 layers
9. In fiber optics, the signal source is (a)
(a) Light waves (b) Radio waves (c) Infrared waves (d) Very low frequency waves
10. Which encoding type always has non-zero average amplitude? (a)
(a) Unipolar (b) Polar (c) Bipolar (d) All of the above
11. Which ISO layer is responsible for error detection? (b)
(a) Physical (b) Data link (c) network (d) session
12. _____ are rules that governs a communication exchange (c)

- (a) Media (b) criteria (c) Protocol (d) all of the above
13. Communication between a computer and keyboard involves _____ (a)
(a) Simplex (b) half-duplex (c) full-duplex (d) automatic
14. Which topology features a point-to-point line configuration? (d)
(a) Mesh (b) Ring (c) star (d) all of the above
15. A network that contains multiple hubs is most likely configured in ____ (c)
(a) Mesh (b) tree (c) bus (d) star
16. Decryption and encryption of data are the responsibilities of ____ layer (c)
(a) Physical (b) Data link (c) Presentation (d) Session
17. A sine wave is _____ (a)
(a) Periodic and continuous (b) aperiodic and continuous (c) periodic and discrete
(d) aperiodic and discrete
18. PCM is an example of _____ conversion (d)
(a) digital-to-digital (b) digital-to-analog (c) analog-to-analog (d) digital-to-digital
19. Which of the following encoding methods does not provide for synchronization? (d)
(a) NRZ-L (b) RZ (c) B8ZS (d) HDB3
20. As the bit rate of FSK signal increases, the bandwidth _____ (c)
(a) decreases (b) increases (c) remains same (d) doubles
21. In which type of signals, the bit rate always equals the baud rate? (a)
(a) FSK (b) 4-PSK (c) QAM (d) all of the above
22. Which encoding method uses alternating positive and negative values for 1's (d)
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23. In asynchronous communication the gap time between bytes is (b)
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UNIT-II

27. The sharing of a medium and its path by two or more devices is called(d)

(a) Modulation (b) encoding (c) line discipline (d) multiplexing

28. Which multiplexing technique transmits analog signals? (a)

(a) FDM (b) synchronous TDM (c) asynchronous TDM (d) b and c

29. Guard band increase the bandwidth for(d)

(a) FDM (b) synchronous TDM (c) asynchronous TDM (d) all of the above

30. To decrease attenuation and distortion of a signal, a line can be(a)

(a) Multiplexed (b) grounded (c) extended (d) conditioned

31. Flow control is needed to prevent(c)

(a) bit errors (b) overflow of the sender buffer (c) overflow of the receiver

(d) Collision between sender and receiver

32. HDLC is an acronym for(b)

(a) half-duplex line communication (b)

(c) half-duplex digital link combination (d) host double level circuit

33. When data and acknowledgement are sent on the same frame, this is called(a)

(a) piggy backing (b) backpacking (c) piggy packing (d) a good idea

34. The advantage of statistical TDM(a)

(a) bandwidth saving (b) speed (c) hardware (d) none of the above

35. In CRC there is no error if the remainder at the receiver is(b)

(a) infinite (b) zero (c) 10 (d) 8

36. Which error detection method involves polynomials? (c)

(a) parity (b) Hamming code (c) CRC (d) checksum

37. Which multiplexing technique transmits digital signals? (d)

(a) FDM (b) synchronous TDM (c) asynchronous TDM (d) b and c

38. In synchronous TDM for N signal sources, each frame contains at least ____ (b)

(a) n slots (b) n+1 slots (c) n-1 slots (d) 0 to n-1 slots

39. Which type of multiplexing has multiple paths? (d)

(a) FDM (b) asynchronous TDM (c) synchronous TDM (d) inverse multiplexing

40. DSL is an example of _____ (d)

(a) Multiplexing (b) de-multiplexing (c) modulation (d) all of the above

41. Multiplexing involves _____ (b)

(a) one path one channel (b) one path and multiple channels

(c) multiple paths one channel (d) multiple paths and multiple channels

42. In sliding window flow control, if the window size is 63, what is the range of sequence numbers(a)

(a) 0 to 63 (b) 0 to 64 (c) 1 to 63 (d) 1 to 64

43. In stop and wait flow control, for n data packets sent, _____ ACK's are needed(a)

(a) n (b) 2n (c) n-1 (d) n+1

44. ARQ stands for _____(b)
(a) automatic repeat quantization (b) automatic repeat request
(c) automatic transmission request (d) acknowledge repeat request

45. HDLC is a _____ protocol(b)
(a) character oriented (b) bit oriented (c) byte oriented (d) count oriented

46. The shortest frame in HDLC protocol is _____(b)
(a) information frame (b) supervisory frame (c) management frame (d) none of these

UNIT-III

47. In token ring, where is the token when a data frame is in circulation(b)
(a) at the receiving station (b) at the sending station (c) circulating in the ring
(d) none of the above

48. FDDI is an acronym for(b)
(a) fast data delivery interface (b) fiber distributed data interface
(c) fiber distributed digital interface (d) fast distributed data interface

49. In FDDI, data normally travels on(a)
(a)The primary ring (b)The secondary ring (c) both rings (d) neither ring

50. In which OSI layer does the FDDI protocol operate? (d)
(a)Physical (b) data link (c) network (d) b and c

51. In which network a frame goes to just one destination instead of all stations(d)
(a)traditional Ethernet (b)switched Ethernet (c) Token Ring (d) a and b
52. DQDB is an acronym for (d)
(a)distributed queue data bus (b) differential queue data bus (c)data queue dual bus
(d) distributed queue dual bus
53. Which type of switching uses the entire capacity of a dedicated link? (a)
(a) circuit switching (b) datagram packet (c) virtual circuit packet (d)message switching
54. A permanent virtual circuit involves(d)
(a) connection establishment (b) data transfer (c) connection release
(d) all of the above
55. Which of the following is a time-division switch? (c)
(a) TSI (b) TDM (c) cross point (d) a and b
56. The PSTN is an example of a(b)
(a) packet switched (b) circuit switched (c) message switched (d) none of the above
57. Which of the following uses physical star topology? (c)
(a)10Base5 (b)10Base2 (c) 10BaseT (d) none of these
58. Which LAN has the highest data rate(d)

(a) 10Base5 (b) 10BaseT (c) Twisted pair token ring (d) FDDI

59. Which is the product of the LLC sub layer? (c)

(a) 802.3 frame (b) 802.5 frame (c) PDU (d) preamble

60. DQDB operates in the _____ layers(c)

(a) physical (b) data link (c) both a & b (d) network

61. SMDS is a service designed to handle high speed communications in _____(b)

(a) LAN (b) MAN (c) WAN (d) all of the above

62. Which field in the DQDB header identifies the type of payload? (c)

(a) access (b) address (c) type (d) priority

63. A switched virtual circuit involves _____(d)

(a) connection establishment (b) data transfer (c) connection release

(d) all of the above

64. The device that connects n inputs to m outputs is _____(b)

(a) cross point (b) cross bar (c) modem (d) RAM

65. In which type of switching do all the data grams of a message follow the same channels of the path?

(c)

(a) circuit switching (b) data gram packet switching

(c) virtual circuit packet switching (d) message switching

66. In a time division switch _____ governs the destination of a packet stored in(b)

- (a) TDM bus (b) cross point (c) cross bar (d) control unit

UNIT-IV

67. ISDN architecture consists of (a)

- (a) 3 planes (b) 4 planes (c) 5 planes (d) 6 planes

68. ISDN stands for(c)

- (a) Information services for digital networks
(b) Internetwork system for data networks (c) Integrated Services Digital Network
(d) Integrated Signals Digital Network

69. The channel used for applications requiring a transmission rate greater than 64 kbps is(d)

- (a) B (b) C (c) D (d) H

70. The normal user interface to an ISDN is PRI or(b)

- (a) bit rate interface (b) basic rate interface (c) byte rate interface
(d) broad rate interface

71. The BRI in ISDN is composed of (d)

- (a) two B channels (b) one H channel (c) one D channel (d) a and c

72. PRI in ISDN consists of (b)

- (a) 23 channels (b) 24 channels (c) 64 channels (d) 65 channels

73. The following is a group of non-ISDN equipment(b)

(a) TE1 (b) TE2 (c) Tex (d) TA

74. Which ISDN plane is associated with signaling and the D channel? (b)

(a) user (b) control (c) management (d) supervisory

75. When you store and forward messages in B- ISDN, you are using(b)

(a) conversational (b) messaging (c) retrieval (d) distributive

76. Commercial TV is an example of(c)

(a) messaging (b) conversational (c) distributive without user control
(d) distributive with user control

77. _____ converts information from non- ISDN format to ISDN format(d)

(a) TE1 (b) TE2 (c) Tex (d) TA

78. Which channel has the highest data rate? (b)

(a) channel B (b) channel D (c) channel C (d) channel H

79. ISDN equivalent of DTE is _____(b)

(a) TE1 (b) TE2 (c) TE3 (d) TE4

80. In _____ services, all transmission is real time between two entities(a)

(a) conversational (b) messaging (c) retrieval (d) distributive

81. Equipment that performs functions related to OSI model layers 1,2,3 is(b)

(a) NT1 (b) NT2 (c) NT3 (d) NT4

82. The overhead using BRI is _____ percent of the total data rate(c)

(a) 10 (b) 20 (c) 30 (d) 25

83. In ISDN _____, the network does not change or process the contents of the data(b)

(a) bearer services (b) teleservices (c) supplementary services (d) none of the above

84. The _____ channel can be used for the control of B channels(b)

(a) B (b) D (c) H (d) C

85. Reference point _____ is the specification for connecting NT1 with NT2(c)

(a) R (b) S (c) T (d) U

86. Equipment that controls the physical and electrical termination of the ISDN at the user premises is called(a)

(a) NT1 (b) NT2 (c) NT3 (d) NT4

UNIT-V

87. Frame Relay requires error checking at the (b)

(a) physical layer (b) data link (c) network (d) none of the above

88. Frame Relay operates in the(c)

(a) physical layer (b) data link layer (c) a and b

(d) physical, data link and network layer

89. Routing and switching in Frame Relay are performed by(b)
(a) physical (b) data link (c) network (d) b and c
90. Which field contains the permanent virtual circuit address in Frame Relay(d)
(a) EA (b) FECN/BECN (c) DE (d) DLCI
91. In data communication, ATM is an acronym for (d)
(a) Automated Teller Machine (b) Automatic Transmission Model
(c) Asynchronous Telecommunication Method (d) Asynchronous Transfer Mode
92. Which layer in ATM protocol reformats the data received from other networks? (c)
(a) physical (b) ATM (c) application adaptation (d) data adaptation
93. Which layer in ATM protocol has a 53-byte cell as an end product? (b)
(a) physical (b) ATM (c) application adaptation (d) cell transformation
94. ATM multiplexes cells using(c)
(a) Asynchronous FDM (b) synchronous FDM (c) Asynchronous TDM (d) Synchronous TDM
95. The transmission medium used by ATM is (d)
(a) twisted pair cable (b) coaxial cable (c) fiber-optic cable (d) all of the above
96. The end packet of the SAR is a data packet that is (b)
(a) variable in length (b) 48 bytes long (c) 44 to 48 bytes long
(d) Greater than 48 bytes long

97. The field on a UNI cell header is used for connection purposes(a)

- (a) VPI (b) VCI (c) CLP (d) GFC

98. ____ is a frame relay option that transmits voice through the network(b)

- (a)LMI (b) VOFR (c) FRAD (d)DLCI

99. What is the length of frame relay address field(d)

- (a) four bytes (b) three bytes (c) two bytes (d) any of the above

100. In frame relay the virtual circuit identifier operates at _____ (b)

- (a) Physical Layer (b) Data link layer (c) Network layer (d) Session layer