

1. The physical layer concerns with

- a) bit-by-bit delivery
- p) process to process delivery
- c) application to application delivery
- d) none of the mentioned

2. Error detection at the Data Link level achieved by []

- a) cyclic redundancy code
- b) Bit stuffing
- c) Hamming codes
- d) Equalization

3. Wireless transmission can be done via

- a) radio waves
- b) microwaves
- c) infrared
- d) all of the mentioned

5. The method of communication in which transmission takes place in both directions, but only in one direction at a time is called_____ []

- a) Simplex
- b) Half duplex
- c) Full duplex
- d) None

6. Protocols are_____ []

- a) Agreements on how communication components

b) Physical communication channels used for transferring data

c) both a&b

d)None

7. How many layers are there in TCP/IP model []

- a) 4 Layers
- b) 7 Layers
- a) 6 Layers
- d) 8 Layers

8. How many bit are there in Ethernet address []

- a) 64 bits
- b) 48 bits
- c) 32 bits
- d) 16bits

9. The Network layer concerns with

- a) bits
- b) Frames
- c) Packets
- d) None

10. The 4 byte IP address consists of []

- a) Network address
- b) host address
- c) both a&b
- d) none

11) The technique in which the data link layer automatically stuff bit '0' after five consecutive '1's_____bitstuffing_____

12. In _____ csma _____ scheme transmission proceeds immediately if the carrier is idle.

13. In pure ALOHA, channel utilization, expressed as throughput S, in terms of the offered load G is given by_____

14. Ethernet uses Manchester encoding.
16. data link layer ensures that error free data is transferred between the adjacent nodes in the network.
17. _____ layer of OSI model also called end-to-end layer.
18. _____ provides a connection – oriented reliable service for sending messages.
19. Bridge works in _____ layer of OSI model
20. In virtual circuit network each packet contains
- a) IP address b) a short VCI number c) both (a) and (b) d) none of the mentioned
22. A _____ is a device that forwards packets between networks by processing the routing information included in the packet.
- a) bridge b) firewall c) router d) all of the mentioned
23. The structure or format of data is called
- a) Syntax b) Semantics c) Struct d) None of the mentioned
24. Communication between a computer and a keyboard involves _____ transmission
- a) Automatic b) Half-duplex c) Full-duplex d) Simplex
25. The first Network
- a) CNNET b) NSFNET c) ASAPNET d) ARPANET
26. The _____ is the physical path over which a message travels
- a) Path b) Medium c) Protocol d) Route
27. A set of rules that governs data communication
- a) Protocols b) Standards c) RFCs d) None of the mentioned
28. Which transmission media has the highest transmission speed in a network?
- a) coaxial cable b) twisted pair cable c) optical fiber d) electrical cable
29. The data link layer takes the packets from _____ and encapsulates them into frames for transmission.
- a) network layer b) physical layer c) transport layer d) application layer

30 .Which one of the following task is not done by data link layer?

- a) framing b) error control c) flow control d) channel coding

31. Automatic repeat request error management mechanism is provided by

- a) logical link control sublayer b) media access control sublayer

- c) network interface control sublayer d) none of the mentioned

32. When 2 or more bits in a data unit has been changed during the transmission, the error is called

- a) random error b) burst error c) inverted error d) none of the mentioned

33. CRC stands for

- a) Cyclic redundancy check b) code repeat check c) code redundancy check d) cyclic repeat check

34. Which one of the following is the multiple access protocol for channel access control?

- a) CSMA/CD b) CSMA/CA c) Both (a) and (b) d) None of the mentioned

35 .The technique of temporarily delaying outgoing outgoing acknowledgements so that they can be hooked onto the next outgoing data frame is called

- a) piggy backing b) cyclic redundancy check c) Fletcher's checksum

- d) none of the mentioned

36. The number of layers in ISO OSI reference model

- a) 5 b) 7 c) 6 d) None of the mentioned.

37. Application layer is implemented in

- a) End system b) NIC c) Ethernet d) None of the mentioned

38. The functionalities of presentation layer includes

- a) Data compression b) Data encryption c) Data translation d) All of the mentioned

39. Dialog control and synchronization of data exchange is provided by

- a) Application layer

- b) Session layer

- c) Transport layer

- d) Link layer

40. In OSI model, when data is sent from device A to device B, the 5th layer to receive data at B is
- a) Application layer b) Transport layer c) Link layer d) Session layer
41. In the OSI model, as a data packet moves from the lower to the upper layers, headers are _____
- a) Added b) Removed c) Rearranged d) None of the mentioned
42. TCP/IP model does not have _____ layer but OSI model have this layer.
- a) session layer b) presentation layer c) application layer d) both (a) and (b)
43. Which layer links the network support layers and user support layers
- a) session layer b) data link layer c) transport layer d) network layer
44. Which address is used in an internet employing the TCP/IP protocols?
- a) physical address and logical address
- b) port address
- c) specific address
- d) all of the mentioned
45. TCP/IP model was developed _____ the OSI model.
- a) prior to b) after c) simultaneous to d) none of the mentioned
46. Which layer is responsible for process to process delivery?
- a) Network layer b) transport layer c) session layer d) data link layer
47. Which address identifies a process on a host?
- a) Physical address b) logical address c) port address d) specific address
48. Which layer provides the services to user?
- a) application layer b) session layer c) presentation layer d) none of the mentioned
49. Transmission data rate is decided by
- a) network layer b) physical layer c) data link layer d) transport layer
50. Physical or logical arrangement of network is
- a) Topology b) Routing c) Networking d) None of the mentioned

51. In this topology there is a central controller or hub

a) Star b) Mesh c) Ring d) Bus

52. This topology requires multipoint connection

a) Star b) Mesh c) Ring d) Bus

53. Networking system spanning states, countries, or the whole world is _____

a) LAN b) WAN c) MAN d) None of the mentioned

54. Data communication system within a building or campus is

a) LAN b) WAN c) MAN d) None of the mentioned

55. Which of this is not a guided media?

a) Fiber optical cable b) Coaxial cable c) Wireless LAN d) Copper wire

56. Coaxial cable consists of _____ concentric copper conductors.

a) 1 b) 2 c) 3 d) 4

57. Most packet switches use this principle

a) Stop and wait b) Store and forward c) Both of the mentioned d) None of the mentioned

58. TCP/IP stands for _____

59. CSMA/CD stands for _____

60. The International Standards Organization (ISO) is the international organization for Standardization was established in the year? []

A) 1945 B) 1946 C) 1947 D) 1948

61. Which layer is fourth layer from physical layer in the OSI model? []

A) Session Layer B) Data link Layer C) Transport Layer D) Network Layer

62. Which Protocol is the connection oriented protocol in the TCP/IP protocol suite? []

A) UDP B) IP C) ARP D) TCP

63. Which of the following is the sub layer of Data link layer? []

A) Ethernet B) Token Ring C) Media Access Control D) Bus

64. Error Detection and Correction is done at which of the following layers? []

A) Physical Layer B) Data Link Layer C) Network Layer D) Application layer

65. The MAC layer emulates which type of communication channel in a multi-point network?[]

A) Full-duplex logical B) Simplex C) Half-duplex logical D) None

66 . CSMA/CA protocol is used in which type of networks? []

A) Token Ring B) Ethernet C) IEEE802.11 D) None

67. _____ augments the CSMA algorithm to detect collision.

A) CSMA/CD

B) CSMA/CA

C) either (a) or (b)

D) both (a) and (b)

68. In _____, each station is forced to send only at the beginning of the time slot.

A) pure ALOHA

B) slotted ALOHA

C) both (a) and (b)

D) neither (a) nor (b)

69. In _____, collisions are avoided through the use of three strategies: the interframe space, the contention window, and acknowledgments.

A) CSMA/CD B) CSMA/CA C) either (a) or (b) D) both (a) and (b)

70. In cyclic redundancy checking, what is the CRC?

A) The quotient B) The dividend C) The divisor D) The remainder

71. There are _____ Internet service providers.

A) Regional B) local C) national and international D) all of the above

72. _____ refers to two characteristics: when data should be sent and how fast it can be sent.

A) Semantics B) Timing C) Syntax D) none of the above

73. _____ is a collection of many separate networks.

A) A WAN B) An internet C) A LAN D) None of the above

74. In the original ARPANET, _____ were directly connected together.

A) routers B) host computers C) networks D) IMPs

75. Frequency of failure and network recovery time after a failure are measures of the _____ of a network.

A)Performance B)Reliability C)Security D)Feasibility

76. Vulnerable time of Pure ALOHA $2T_{fr}$

77. Vulnerable time of SLOTTED ALOHA T_{fr}

78. Throughput of pure ALOHA $s=g*e^{-2g}$ $g=1/2$

79. Throughput of Slotted ALOHA $s=g*e^{-g}$ $g=1$

80. In the _____ Token passing _____ method, the stations in a network are organized in a logical ring.

81. ARPANET stands for _____ Advanced Research Project Agency Network

82. In _____ CSMA _____ scheme transmission proceeds immediately if the carrier is idle

83. Network layer is implemented in []

A) NIC B) Ethernet C) Router D) End system

84. How many bits are there in Port Address []

A) 64 bits B) 48 bits C) 32 bits D) 16bits