

PRACTICE QUESTIONS (CTTC, KOLKATA)

Subject name: Network Theory

1. A network router joins two _____ together?
 - A. Computers
 - B. Switches
 - C. Networks
 - D. Gateway
2. Which of the following below is a loop back IP address?
 - A. 127.0.0.0
 - B. 127.0.1.1
 - C. 127.0.1.0
 - D. 127.0.0.1
3. Ping command works on which protocol?
 - A. ICMP
 - B. TCP
 - C. IP
 - D. UDP
4. Transport layer of OSI model lies between Network and _____ layer.
 - A. Application
 - B. Data link
 - C. Session
 - D. Presentation
5. Which of the following protocols below work in application layer?
 - A. POP
 - B. PPP
 - C. FTP
 - D. Both a and d above
6. What is the port number for HTTP?
 - A. 25
 - B. 80
 - C. 21
 - D. 65
7. IPV4 is more commonly used than IPV6?
 - A. True
 - B. False
8. From the options below, which suits best for MODEM?
 - A. a device that modulates an analog carrier signal to encode digital information
 - B. a device that modulates a digital carrier signal to encode analog information
 - C. a device that modulates an analog carrier signal to decode digital information
 - D. a device that modulates a digital carrier signal to decode analog information
9. What is the size of an IP V4 address?

- A. 64 bit
- B. 128 bit
- C. 16 bit
- D. 32 bit

10. MAC addresses are also known as?

- A. Hardware address
- B. Physical address
- C. both a and b
- D. IP address

11. 3 network point that provides entrance into another network is called as _____

- A. Node
- B. Gateway
- C. Switch
- D. Router

12. UDP is an unreliable protocol.

- A. True
- B. False

13. Token Ring is a data link technology for?

- A. WAN
- B. MAN
- C. LAN
- D. both a and b above

14. Which of the following protocol below are suited for email retrieval?

- A. POP3
- B. ICP
- C. FTP
- D. Both a and b above

15. TELNET used _____ protocol for data connection

- A. TCP
- B. UDP
- C. IP
- D. DHCP

16. 10Base5, 10Base2, 10BaseT are types of?

- A. Internet
- B. LAN
- C. Ethernet
- D. Cables

17. The process of assigning IP address for specific times to the various hosts by DHCP is called as?

- A. Lend
- B. sublease
- C. let
- D. Lease

18. What is the full form of URL?

- A. Uniform routing locator
- B. Uniform Resource locator
- C. Universal Resource locator
- D. Uniform router locator

19. _____ is a standard suite of protocols used for packet switching across computer networks.

- A. x.22
- B. x.23
- C. x.25
- D. x.26

20. What is the full form of CAN?

- A. Campus Area Network
- B. Cloud Area Network
- C. Control Area network
- D. both A and B

21. Which of the following below is/are capability of ICMP protocol?

- A. Report package count
- B. Report network congestion
- C. Both b and d
- D. Report availability of remote hosts

22. ARP works on Ethernet networks.

- A. False
- B. True

23. Piconets in blue tooth a minimum of two and a maximum of _____ Bluetooth peer devices.

- A. Five
- B. eight
- C. nine
- D. four

24. Dynamic addressing doesn't allow many devices to share limited Address space on a network

- A. True
- B. False

25. NAT stands for _____.

- A. network address transformer
- B. network address translator
- C. network address translation
- D. Both B and C above

26. What is the difference between a switch and a hub?

- A. Switches operate at physical layer while hubs operate at data link layer
- B. Switches operate at data link layer while hubs operate at transport layer
- C. Switches operate at data link layer while hubs operate at physical layer
- D. Switches operate at transport layer while hubs operate at physical layer

27. When computers in a network listen and receive the signal, it is termed as active topology

- A. True
- B. False

28. In 10base2, 10base5, what does 2 and 5 stand for?

- A. Speed in mbps
- B. Number of segments
- C. Length of segment
- D. Size of segment

29. _____ is added to data packet for error detection.

- A. checksum bit
- B. error bit
- C. parity bit

30. ALL IP addresses are divided into network address and host address

- A. True
- B. False

31. Both ping and tracert are used to find If the computer is in network.

- A. True
- B. False

32. What is the difference between ring and bus topology?

- A. in Ring all nodes are connected with another in a loop while in bus they are connected to a central cable
- B. in Ring all nodes are connected with another loop while in bus they are connected to a central cable
- C. In bus all nodes are connected with another in a loop while in star they are connected to a central node
- D. In Bus all nodes are connected with another loop while in star they are connected to a central cable

33. MAC addressing works in data link layer while IP addressing works in network layer.

- A. True
- B. False

34. A packet whose destination is outside the local TCP/IP network segment is sent to the _____.

- A. File server
- B. Default gateway
- C. DNS server
- D. DHCP server

35. Why was the OSI model developed?

- A. manufacturers disliked the TCP/IP protocol suite
- B. the rate of data transfer was increasing exponentially
- C. standards were needed to allow any two systems to communicate
- D. none of the above

36. Which piece of information is not vital for a computer in a TCP/IP network?

- A. IP address
- B. Default gateway

C. Subnet Mask

D. DNS server

37. The physical layer is concerned with the movement of _____ over the physical medium.

A. programs

B. dialogs

C. protocols

D. Bits

38. Which protocol below operates at the network layer in the OSI model?

A. IP

B. ICMP

C. RARP

D. All of the above

39. 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. Modified

40. Session layer of the OSI model provides

A. Data representation

B. Time control

C. Remote job execution

D. Creating logical connections

41. IPv6 has _____ -bit addresses.

A. 32

B. 64

C. 128

D. Variable

42. Which one of the following functionalities isn't provided by TCP?

A. Flow control

B. Addressing

C. Retransmission of packets as required

D. Proper sequencing of the packets

43. Which of the following can be an Ethernet physical address?

A. 01:02:01:2C:4B

B. 07:01:02:01:2C:4B:2C

C. 07:01:02:01:2C:4B

D. none of the above

44. Which of the IP headers decides when the packet should be discarded?

A. Fragment control

B. TTL

C. Checksum

D. Header length

45. Which IP address is reserved for software loop-back?

A. 224.x.x.x

B. 127.x.x.x

C. 0.0.0.0

D. 255.255.255.255

46. What is the network ID for a computer whose IP address is 190.148.64.23?

A. 190

B. 190.148

C. 190.148.64

D. None of the above

47. Which port is reserved for use of the SMTP protocol?

A. 21

B. 23

C. 25

D. 53

48. Which one of the followings is a connectionless protocol?

A. UDP

B. Ethernet

C. IPX

D. All of the above

49. Which application below uses the UDP protocol?

A. DNS

B. TFTP

C. RIP

D. All of the above

50. How many IP addresses can be assigned to hosts in a C-class Network segment with a subnet mask of 255.255.255.192?

A. 62

B. 126

C. 192

D. 254

51. Packet discard policy is implemented in

(A) Physical layer

(B) Data link layer

(C) MAC layer

(D) Network layer

52. While booting the system the IP address is

(A) 1.1.1.1

(B) 1.1.0.0

(C) 0.0.1.1

(D) 0.0.0.0

53. In open loop congestion control techniques, the decisions are based on the

(A) Without regard to the current state of the network

(B) With regard to the current state of the network

(C) With regard to the choice of the host

(D) Without regard to the choice of the host

54. In closed loop congestion control techniques, the decisions are based on the

(A) concept of a feedback loop (B) Concept of a forward loop

(C) Concept of current state of network (D) None of these

55.....is used to validate the identity of the message sender to the recipient

(A) Encryption (B) Decryption

(C) Digital certificate (D) None of these

56. When too many packets are present in the subnet, and performance Degrades then it leads to

(A) Ingestion (B) Congestion

(C) Digestion (D) Diffusion

57. In case higher bandwidth can be achieved.

(A) Connectionless networks (B) connection oriented networks

(C) Virtual circuit networks (D) optical networks

58. Time out determination policy is used in

(A) Network layer (B) data link layer

(C) **Transport layer** (D) application layer

59. In transport layer, End to End delivery is the movement of data from

(A) One station to the next station (B) One network to the other network

(C) Source to destination (D) One router to another router

60. Which of the following is required to communicate between two computers?

(A) Communications software (B) Protocol

(C) Communication hardware (D) All of above including access to transmission medium

61. Terminals are required for

(A) real-time, batch processing & time-sharing

(B) Real time, time-sharing & distributed message processing

(C) Real time, distributed processing & manager inquiry

(D) Real-time, time sharing & message switching

62. Sending of a IP packet from host 1 to host 2 where both are of same LAN but the packet is transferred through different intermediate LANs is called

- (A) Tunneling
- (B) Routing
- (C) Diverting
- (D) Forwarding

63. LANs can be connected by a device called

- (A) Routers
- (B) Modems
- (C) Ethernet card
- (D) Bridges

64. FDDI is an acronym for

- (A) Fast data delivery interface
- (B) Fiber distributed data interface
- (C) Fiber distributed digital interface
- (D) fast distributed data interface

65. In transmission, the channel capacity is shared by both Communicating devices at all times.

- (A) Simplex
- (B) half-duplex
- (C) full-duplex
- (D) automatic

66. The DNS name space is divided into non overlapping

- (A) Regions
- (B) blocks
- (C) Divisions
- (D) zones

67. Repeater function in the layer.

- (A) Physical
- (B) Data link
- (C) Network
- (D) None of these

68. A repeater takes a weakened or corrupted signal and it.

- (A) Amplifies
- (B) Regenerates
- (C) Resample
- (D) Reroute

69. OSI model, the _____ layer is concerned with finding the best path for the 1. In the data from one point to the next within the network.

- a. Data Link
- b. Network
- b. Physical
- c. Application

70. The _____ layer can perform ASCII to non-ASCII character conversions.

- a. Transport
- b. Data Link
- b. Presentation
- c. Application

71. Large networks that encompass parts of states, multiple states, countries and the world are called:

- a. MANs
- b. LANs
- b. PANs
- d. WANs

72. Which category of UTP cable is the most current and commonly implemented?

- a. Category 4
- b. Category 5
- b. Category 5e
- c. Category 6

73. The _____ of a signal is the number of times a signal makes a complete cycle within a given time frame.

- a. Bandwidth
- b. Frequency
- b. Amplitude
- c. Spectrum

74. In the OSI model, which layer performs encryption or data compression?

- a. Application
- b. Network
- b. Data Link
- c. Presentation

75. The loss of signal strength is called:

- a. Attenuation
- b. Amplitude
- b. Noise
- c. Crosstalk

76. Electromagnetic interference is often generated by:

- a. Motors
- b. Fluorescent lights
- b. Power lines
- c. All of the above

77. _____ identifies terminating devices such as terminals and computers.

- a. DTE
- b. DCE
- b. CSU
- c. DSU

78. Error detection is performed at the _____ layer of the OSI model?

- a. Data Link
- b. Transport
- b. Network
- c. Both a and b

79. In a _____ topology the workstations are connected by a linear coaxial cable.

- a. Bus
- b. Star-wired bus
- c. Star-wired ring
- c. Ring

80. Which protocol requires that a host cease to transmit for a random interval once a collision is detected on the wire?

- a. CSMA/CD
- b. Round robin
- d. Reservation
- c. All of the above

Answer=A

81. Which layer addresses do routers use to determine a packet's path?

- a. Data Link
- b. Network
- e. Physical
- c. Application

82. The device that can operate in place of a hub is a:

- a. Switch
- b. Bridge
- f. Router
- d. Gateway

83. The postal system is a good example of which type of communication?

- a. Broadcast
- b. Connection oriented
- c. Connectionless
- d. Both a and c

84. _____ is a set of codes inserted into a document intended for display on a web browser

- a. HTML
- b. HTTP
- c. FTP
- d. Telnet

85. The protocol that allows dynamic assignment of IP Addresses to workstations is known as:

- a. ICMP
- b. DHCP
- c. SMTP
- d. SNMP

86. The bottom layer in the OSI model, the data link layer, handles the transmission of bits over a communications channel.

- a. true
- b. false

87. Every object on the Internet has a unique URL.

- a. true
- b. False

88. Which device performs the function of determining the path that messages should take through internetworks?

- a) A router
- b) A firewall
- c) A web server

89. What type of network must a home user access in order to do online shopping?

- a) An intranet
- b) The Internet
- c) An extranet
- d) A local area network

90. What type of communication will send a message to all devices on a local area network?

- a) Broadcast
- b) Multicast
- c) Uni cast
- d) All cast

91. Which PDU format is used when bits are received from the network medium by the NIC of a host?

- A) file
- b) Frame
- c) Packet
- d) Segment

92. Which type of connector does a network interface card use?

- a) DIN
- b) PS-2
- c) RJ-11
- d) RJ-45

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94. What statement describes Ethernet?

- a) It defines the most common LAN type in the world.
- b) It is the required Layer 1 and 2 standards for Internet communication.
- c) It defines a standard model used to describe how networking works.
- d) It connects multiple sites such as routers located in different countries.

95. What statement describes a characteristic of MAC addresses?

- a) They must be globally unique.
- B) They are only routable within the private network.
- c) They are added as part of a Layer 3 PDU.
- d) They have a 32-bit binary value.

96. Which two parts are components of an IPv4 address? (Choose two.)

- a) Subnet portion
- b) Network portion
- c) Logical portion
- d) Host portion
- e) Physical portion
- f) Broadcast portion

97. What subnet mask is represented by the slash notation /20?

- A) 255.255.255.248
- b) 255.255.224.0
- c) 255.255.240.0
- d) 255.255.255.0
- e) 255.255.255.192

98. What is the speed of light air?

1. 3 km/sec
2. 300 km/sec

3. 3 lakhs km/sec

4. 3000km/sec

99. Which of the following is a private address?

1. 172.20.50.1

2. 192.168.10.5

3. 10.61.50.5

4. All of the above

100. Public address are used for

1. Local area connection

2. PC-SERVER connection

3. Used in Internet

4. Used for CAN

101. Which kind of network communication can't possible for IPV6?

1. Unicasting

2. Broadcasting

3. Anycasting

4. Multicasting

102. Default-gateway is the address assigned for

1. A server

2. Loopback testing

3. Router interface connected to LAN

4. Router interface connected to WAN

103. Which topology is the most popular to setup LAN

1. Mesh

2. Cellular

3. STAR

4. Ring

104. 190.50.10.0/18 here the value '18' represents the

1. No. of Host bits
2. No. of network bits
3. Default gateway
4. Subnet mask

105. The TCP/IP model contains _____ layers

1. Seven
2. Four
3. Three
4. No TCP/IP model is there

106. What is the Binary $(568)_{10}$

1. $(1000111000)_2$
2. $(1000111100)_2$
3. $(1001101000)_2$
4. $(1000110100)_2$

107. Which type of transmission media we can use for Switch-PC connection

1. Cross-over cable
2. Roll-over cable
3. Straight-through cable
4. Serial cable

108. What is the maximum speed of a Fast Ethernet Port?

1. 10 mbps.
2. 1000mbps
3. 100mbps
4. 75 mbps

