1. Which type of Ethernet framing is used for TCP/IP and DEC net?
   a) Ethernet 802.3
   b) Ethernet 802.2
   c) Ethernet II
   d) Ethernet SNAP
2. Which routing protocol implements the diffusing update algorithm?
   a) IS-IS
   b) IGRP
   c) EIGRP
   d) OSPF
3. Multiple objects can be sent over a TCP connection between client and server in a persistent HTTP connection.
   a) True
   b) False
4. . HTTP is _____ protocol.
   a) application layer
   b) transport layer
   c) network layer
   d) data link layer
5. FTP server listens for connection on which port number?
   a) 20
   b) 21
   c) 22
   d) 23
6. TCP, FTP, Telnet, SMTP, POP etc. are examples of _____
   a) Socket
   b) IP Address
   c) Protocol
   d) MAC Address
7. LSP stands for _____
   a) Link Stable Packet
   b) Link State Packet
   c) Link State Protocol
   d) Link State Path
8. Open Shortest Path First (OSPF) is also called as _____
   a) Link state protocol
   b) Error-correction protocol
   c) Routing information protocol
   d) Border gateway protocol
9. The computation of the shortest path in OSPF is usually done by _____
   a) Bellman-ford algorithm
   b) Routing information protocol

c) Dijkstra's algorithm or link state
d) Distance vector routing

10. Which of the following is false with respect to the features of OSPF?
    a) Support for fixed-length subnetting by including the subnet mask in the routing message
    b) More flexible link cost than can range from 1 to 65535
    c) Use of designated router
    d) Distribution of traffic over multiple paths that have equal cost to the destination
11. In OSPF, which protocol is used to discover neighbour routers automatically?
    a) Link state protocol
    b) Error-correction protocol
    c) Routing information protocol
    d) Hello protocol
12. Distance vector protocols use the concept of split horizon, but link-state routing protocols, such as OSPF, do not.
    a) True
    b) False
13. Datagram switching is done at which layer of OSI model?
    a) Network layer
    b) Physical layer
    c) Application layer
    d) Transport layer
14. A proxy firewall filters at _____
    a) Physical layer
    b) Data link layer
    c) Network layer
    d) Application layer
15. A packet filter firewall filters at _____
    a) Physical layer
    b) Data link layer
    c) Network layer or Transport layer
    d) Application layer
16. . Which multiple access technique is used by IEEE 802.11 standard for wireless LAN?
    a) CDMA
    b) CSMA/CA
    c) ALOHA
    d) CSMA/CD
17. The size of an IP address in IPv6 is _____
    a) 32 bits
    b) 64 bits
    c) 128 bits = 16byte.
    d) 265 bits

18. Which protocol assigns IP address to the client connected in the internet?
    a) DHCP
    b) IP
    c) RPC
    d) RSVP
19. SONET stands for _____
    a) synchronous optical network
    b) synchronous operational network
    c) stream optical network
    d) shell operational network
20. The EIGRP metric values include:
    a) Delay
    b) Bandwidth
    c) MTU
    d) All of the mentioned
21. . How many layers are present in the Internet protocol stack (TCP/IP model)?
    a) 5
    b) 7
    c) 6
    d) 10
22. Which of the following layers is an addition to OSI model when compared with TCP IP model?
    a) Application layer
    b) Presentation layer
    c) Session layer
    d) Session and Presentation layer
23. Delimiting and synchronization of data exchange is provided by _____
    a) Application layer
    b) Session layer
    c) Transport layer
    d) Link layer
24. OSI stands for _____
    a) open system interconnection
    b) operating system interface
    c) optical service implementation
    d) open service Internet
25. TCP/IP model does not have _____ layer but OSI model have this layer.
    a) session layer
    b) transport layer
    c) application layer
    d) network layer

26. Which layer is used to link the network support layers and user support layers?
    a) session layer
    b) data link layer
    c) transport layer
    d) network layer
27. Which layer is responsible for process to process delivery in a general network model?
    a) network layer
    b) transport layer
    c) session layer
    d) data link layer
28. Which layer provides the services to user?
    a) application layer
    b) session layer
    c) presentation layer
    d) physical layer
29. Transmission data rate is decided by _____
    a) network layer
    b) physical layer
    c) data link layer
    d) transport layer
30. The physical layer translates logical communication requests from the _____ into hardware specific operations.
    a) data link layer
    b) network layer
    c) trasnport layer
    d) application layer
31. 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
32. CRC stands for _____
    a) cyclic redundancy check
    b) code repeat check
    c) code redundancy check
    d) cyclic repeat check
33. Which of the following are transport layer protocols used in networking?
    a) TCP and FTP

b) UDP and HTTP
c) TCP and UDP
d) HTTP and FTP

34. User datagram protocol is called connectionless because _____
a) all UDP packets are treated independently by transport layer
b) it sends data as a stream of related packets
c) it is received in the same order as sent order
d) it sends data very quickly

35. WAN stands for _____
a) World area network
b) Wide area network
c) Web area network
d) Web access network

36. In the transfer of file between server and client, if the transmission rates along the path is 10Mbps, 20Mbps, 30Mbps, 40Mbps. The throughput is usually _____
a) 20Mbps
b) 10Mbps thput(path)= min thput(link)
c) 40Mbps
d) 50Mbps

37. The total nodal delay is given by _____
a) dnodal = dproc – dqueue + dtrans + dprop
b) dnodal = dproc + dtrans – dqueue
c) dnodal = dproc + dqueue + dtrans + dprop
d) dnodal = dproc + dqueue – dtrans – dprop

38. Which of the following architecture uses the CSMA/CD access method?
a) ARC net
b) Ethernet
c) Router
d) STP server

39. Which is not a application layer protocol?
a) HTTP
b) SMTP
c) FTP
d) TCP

40. Electronic mail uses which Application layer protocol?
    a) SMTP
    b) HTTP
    c) FTP
    d) SIP

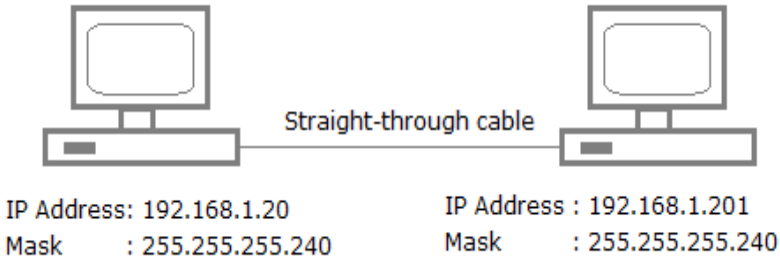
41. Which one of the following protocol delivers/stores mail to reciever server?
    a) simple mail transfer protocol
    b) post office protocol
    c) internet mail access protocol
    d) hypertext transfer protocol
42. Multiple objects can be sent over a TCP connection between client and server in a persistent HTTP connection.
    a) True
    b) False
43. FTP server listens for connection on port number _____
    a) 20
    b) 21
    c) 22
    d) 23
44. A session may include _____
    a) Zero or more SMTP transactions
    b) Exactly one SMTP transactions
    c) Always more than one SMTP transactions
    d) Number of SMTP transactions cant be determined
45. SMTP uses which of the following TCP port?
    a) 22
    b) 23
    c) 21
    d) 25
46. . DHCP (dynamic host configuration protocol) provides _____ to the client.
    a) IP address
    b) MAC address
    c) Url
    d) None of the mentioned
47. DHCP is used for _____
    a) IPv6
    b) IPv4
    c) Both IPv6 and IPv4
    d) None of the mentioned

48. A _____ is an extension of an enterprise's private intranet across a public network such as the internet, creating a secure private connection.
    a) VNP
    b) VPN
    c) VSN
    d) VSPN
49. What is the header size of a UDP packet?
    a) 8 bytes
    b) 8 bits
    c) 16 bytes
    d) 124 bytes
50. ATM standard defines _____ layers.
    a) 2
    b) 3
    c) 4
    d) 5
51. An ATM cell has the payload field of _____
    a) 32 bytes
    b) 48 bytes
    c) 64 bytes
    d) 128 bytes
52. Frame relay has error detection at the _____
    a) physical layer
    b) data link layer
    c) network layer
    d) transport layer
53. Which of the following field in IPv4 datagram is not related to fragmentation?
    a) Flags
    b) Offset
    c) TOS
    d) Identifier
54. Which field helps to check rearrangement of the fragments?
    a) Offset
    b) Flag
    c) TTL
    d) Identifier
55. The size of an IP address in IPv6 is _____
    a) 4 bytes
    b) 128 bits
    c) 8 bytes
    d) 100 bits

56. IPv6 does not use _____ type of address.
    a) broadcast
    b) multicast
    c) anycast
    d) unicast
57. Which statement(s) about IPv6 addresses are true?
    a) Leading zeros are required
    b) Two colons (::) are used to represent successive hexadecimal fields of zeros
    c) Two colons (::) are used to separate fields
    d) A single interface cannot have multiple IPv6 addresses of different types

58. Which of the following is the broadcast address for a Class B network ID using the default subnetmask?
    a) 172.16.10.255
    b) 255.255.255.255
    c) 172.16.255.255
    d) 172.255.255.255
59. You have an IP address of 172.16.13.5 with a 255.255.255.128 subnet mask. What is your class of address, subnet address, and broadcast address?
    a) Class A, Subnet 172.16.13.0, Broadcast address 172.16.13.127
    b) Class B, Subnet 172.16.13.0, Broadcast address 172.16.13.127
    c) Class B, Subnet 172.16.13.0, Broadcast address 172.16.13.255
    d) Class B, Subnet 172.16.0.0, Broadcast address 172.16.255.255
60. State whether true or false.
    i) A connection oriented protocol can only use unicast addresses.
    ii) The any cast service is included in IPV6.
    a) True, True
    b) True, False
61. c) False, True
    d) False, False
        i. A crossover cable should be used in place of the straight-through cable.
        ii. A rollover cable should be used in place of the straight-through cable.
        iii. The subnet masks should be set to 255.255.255.192.
        iv. A default gateway needs to be set on each host.
        v. The subnet masks should be set to 255.255.255.0.
62. a)i only
    b)ii only
    c)iii and iv only
    d) i and v only

63.



64. If you wanted to have 12 subnets with a Class C network ID, which subnet mask would you use?
a) 255.255.255.252
b) 255.255.255.255
c) 255.255.255.240
d) 255.255.255.248

65. Your router has the following IP address on Ethernet0: 172.16.2.1/23. Which of the following can be valid host IDs on the LAN interface attached to the router?

i. 172.16.1.100

ii. 172.16.1.198

iii. 172.16.2.255

iv. 172.16.3.0

a)ionly
b)iiandiiionly
c)iiiandivonly
d) ii only

66. What is the maximum number of IP addresses that can be assigned to hosts on a local subnet that uses the 255.255.255.224 subnet mask?
a) 14
b) 15
c) 16
d) 30

67. You need to subnet a network into 5 subnets, each with at least 16 hosts. Which classful subnet mask would you use?
a) 255.255.255.192
b) 255.255.255.224

c) 255.255.255.240
d) 255.255.255.248

68. If an Ethernet port on a router were assigned an IP address of 172.16.112.1/25, what would be the valid subnet address of this host?
a) 172.16.112.0
b) 172.16.0.0
c) 172.16.96.0
d) 172.16.255.0

69. You have an interface on a router with the IP address of 192.168.192.10/29. Including the router interface, how many hosts can have IP addresses on the LAN attached to the router interface?
a) 6
b) 8
c) 30
d) 32

70. What is the subnet id of a host with an IP address 172.16.66.0/21?
a) 172.16.36.0
b) 172.16.48.0
c) 172.16.64.0
d) 172.16.0.0

71. . The network address of 172.16.0.0/19 provides how many subnets and hosts?
a) 7 subnets, 30 hosts each
b) 8 subnets, 8,190 hosts each
c) 8 subnets, 2,046 hosts each
d) 7 subnets, 2,046 hosts each

72. 14. Novell's implementation of RIP updates routing tables every _____ seconds.
a) 60
b) 90
c) 10
d) 30

73. How often does a RIPv1 router broadcast its routing table by default?
a) Every 30 seconds
b) Every 60 seconds
c) Every 90 seconds
d) RIPv1 does not broadcast periodically

74. Which protocol gives a full route table update every 30 seconds?
a) IEGRP

b) RIP
c) ICMP
d) IP

75. Which routing protocol implements the diffusing update algorithm?
    a) IS-IS
    b) IGRP
    c) EIGRP
    d) OSPF

76. The term that is used to place packet in its route to its destination is called _____
    a) Delayed
    b) Urgent
    c) Forwarding
    d) Delivering
77. Next-Hop Method is used to reduce contents of a _____
    a) Revolving table
    b) Rotating Table
    c) Routing Table
    d) Re-allocate table
78. LSP stands for _____
    a) Link Stable Packet
    b) Link State Packet
    c) Link State Protocol
    d) Link State Path
79. Open Shortest Path First (OSPF) is also called as _____
    a) Link state protocol
    b) Error-correction protocol
    c) Routing information protocol
    d) Border gateway protocol
80. In OSPF, which protocol is used to discover neighbour routers automatically?
    a) Link state protocol
    b) Error-correction protocol
    c) Routing information protocol
    d) Hello protocol
81. Distance vector protocols use the concept of split horizon, but link-state routing protocols, such as OSPF, do not.
    a) True
    b) False
82. The Hello protocol sends periodic updates to ensure that a neighbor relationship is maintained between adjacent routers.

a) True
b) False

83. Which multiple access technique is used by IEEE 802.11 standard for wireless LAN?
a) CDMA
b) CSMA/CA
c) ALOHA
d) CSMA/CD

84. SONET stands for _____
a) synchronous optical network
b) synchronous operational network
c) stream optical network
d) shell operational network

85. EIGRP sends a hello message after every _____ seconds.
a) 5 seconds (LAN), 60 seconds (WAN)
b) 5 seconds (LAN), 5 seconds (WAN)
c) 15s
d) 180s

86. . The EIGRP metric values include:
a) Delay
b) Bandwidth
c) MTU
d) All of the mentioned