Academy Of Technology

Subject: Computer Networking
Question Bank- Part II

1. Switches function in which layer(s) of OSI model?
   a) physical b) data link c) network d)both a and
2. The transport layer provides …… delivery.
   a) bit-to-signal transmission b) bit synchronization c) process-to-process
   d) hop-to-hop
3. The dedicated physical layer devices are –
   a) Hub & Switch b) Hub & multiplexer c) ATM switch & MUX d) Repeater & Router
4. Repeaters function in which layer(s)?
   a) physical b) data link c) network d) both a and b
5. Bridges/Switches function in which layer(s)?
   a) physical b) data link c) network d) both a and b
6. Routers function in which layers?
   a) physical and data link b) physical, data link and network
   c) data link and network d) network and transport
7. Gateways in OSI model can function all the way up to –
   a) transport layer b) session layer c) presentation layer d) application layer
8. The network layer is concerned with _____ of data.
   a) bits
   b) frames
   c) packets
   d) bytes
9. Which one of the following is not a function of network layer?
   a) routing
   b) inter-networking
   c) congestion control
   d) error control

10. A 4 byte IP address consists of _____
    a) only network address
    b) only host address
    c) **network address & host address**
    d) network address & MAC address
11. In virtual circuit network each packet contains _____
    a) full source and destination address
    b) **a short VC number**
    c) only source address
    d) only destination address
12. Which of the following routing algorithms can be used for network layer design?
    a) shortest path algorithm
    b) distance vector routing
    c) link state routing
    d) **all of the mentioned**
13. A subset of a network that includes all the routers but contains no loops is called _____
    a) **spanning tree**
    b) spider structure
    c) spider tree
    d) special tree
14. ICMP is primarily used for _____
    a) **error and diagnostic functions**
    b) addressing
    c) forwarding
    d) routin
15. The term HTTP stands for?
    a) Hyper terminal tracing program
    b) Hypertext tracing protocol
    c) **Hypertext transfer protocol**
    d) Hypertext transfer program
16. The location of a resource on the internet is given by its?
    a) Protocol
    b) **URL**
    c) E-mail address
    d) ICQ
17. Which software prevents the external access to a system?
    a) **Firewall**
    b) Gateway

c) Router
d) Virus checker

18. The term FTP stands for?
    a) File transfer program
    b) File transmission protocol
    c) **File transfer protocol**
    d) File transfer protection
19. The maximum length (in bytes) of an IPv4 datagram is?
    a) 32
    b) 1024
    c) **65535**
    d) 512
20. The IP network 192.168.50.0 is to be divided into 10 equal sized subnets. Which of the following subnet masks can be used for the above requirement?
    a) 255.243.240
    b) 255.255.0.0
    c) **255.255.255.0**
    d) 255.0.0.0

21. When the mail server sends mail to other mail servers it becomes ___ ?
    a) **SMTP client**
    b) SMTP server
    c) Peer
    d) Master

22. The length of an IPv6 address is?
    a) 32 bits
    b) 64 bits
    c) **128 bits**
    d) 256 bits
23. Which of the following address belongs class A?
    a) **121.12.12.248**
    b) 130.12.12.248
    c) 128.12.12.248
    d) 129.12.12.248
24. Which of the following is correct IPv4 address?
    a) 124.201.3.1.52

b) 01.200.128.123
c) 300.142.210.64
d) 10110011.32.16.8
e) **128.64.0.0**

25. Which of the following IP addresses can be used as (a) loop-back addresses?
    a) 0.0.0.0
    b) **127.0.0.1**
    c) 255.255.255.255
    d) 0.255.255.255
26. In the IPv4 addressing format, the number of networks allowed under Class C addresses is
    a) 2^{14}
    b) 2^{7}
    c) **2^{21}**
    d) 2^{24}
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28. An Internet Service Provider (ISP) has the following chunk of CIDR-based IP addresses available with it: 245.248.128.0/20. The ISP wants to give half of this chunk of addresses to Organization A, and a quarter to Organization B, while retaining the remaining with itself. Which of the following is a valid allocation of addresses to A and B?
    a) **245.248.136.0/21 and 245.248.128.0/22**
    b) 245.248.128.0/21 and 245.248.128.0/22
    c) 245.248.132.0/22 and 245.248.132.0/21
    d) 245.248.136.0/24 and 245.248.132.0/21

29. If a class B network on the Internet has a subnet mask of 255.255.248.0, what is the maximum number of hosts per subnet?
    a) 1022
    b) 1023
    c) **2046**
    d) 2047

30. The subnet mask for a particular network is 255.255.31.0. Which of the following pairs of IP addresses could belong to this network?
    a) 172.57.88.62 and 172.56.87.233
    b) 10.35.28.2 and 10.35.29.4
    c) 191.203.31.87 and 191.234.31.88
    d) **128.8.129.43 and 128.8.161.55**

31. Which of the following can be used as both Source and Destination IP?
    a) 198.168.1.255
    b) **10.0.0.1**
    c) 127.0.0.1
    d) 255.255.255.255

32. Which of the following is public IP address?
    a) 10.15.14.12
    b) 192.168.52.62
    c) **172.32.1.1**
    d) None of the Above

33. In class B if subnet mask is 255.192.0.0 Total Number of networks than can be joined
    a) 32
    b) **64**
    c) 16
    d) None of the above

34. If block contains 32 IP address which of the following is first address of the block?
    a) 10.0.0.16
    b) 10.0.0.32
    c) **10.0.0.160**
    d) None of the above

35. The default subnet mask for a class B network can be
    a) 255.255.255.0
    b) 255.0.0.0
    c) 255.255.192.0
    d) **255.255.0.0**

36. The DNS maps the IP address to
    a) A binary address as strings

b) An alphanumeric address
c) **A hierarchy of domain names**
d) A hexadecimal address

37. Which of the following is not applicable for IP?
a) **Error reporting**
b) Handle addressing conventions
c) Datagram format
d) Packet handling conventions

38. Which of the following field in IPv4 datagram is not related to fragmentation?
a) Flags
b) Offset
c) **TOS**
d) Identifier

39. . ..... is responsible for converting the higher level protocol addresses to physical Network Addresses.
a) **Address Resolution Protocol (ARP)**
b) Reverse Address Resolution Protocol (RARP)
c) Bootstrap Protocol (BOOTP)
d) Internet Control Message Protocol (ICMP)

40. Which of the following IP address or addresses is private IP address?
a) **10.0.0.1**
b) **172.16.0.10**
c) 15.1.5.6
d) None

41. The DNS maps the IP address to
a) A binary address as strings
b) An alphanumeric address
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d) A hexadecimal address

42. Which of the following is public IP address?
a) 10.15.14.12
b) 192.168.52.62
c) **172.32.1.1**
d) None of the Above

43. ……. protocol is a popular example of a link-state routing protocol.
a) SPF
b) BGP
c) RIP
d) **OSPF**

44. ……. was originally developed to provide a loop-free method of exchanging routing information between autonomous systems.
    a) OSPF
    b) EIGRP
    c) **BGP**
    d) RIP
45. In OSPF, a ……. link is a network is connected to only one router.
    a) point-to-point
    b) transient
    c) **stub**
    d) multipoint
46. In OSPF, when the link between two routers is broken, the administration may create a …….. link between them using a longer path that probably goes through several routers.
    a) point-to-point
    b) transient
    c) stub
    d) **multipoint**
47. The ..... protocol allows the administrator to assign a cost, called the metric, to each route.
    a) **OSPF**
    b) RIP
    c) BGP
    d) BBGP
48. The Open Shortest Path First(OSPF) protocol is an intra domain routing protocol based on ..... routing.
    a) distance vector
    b) **link state**
    c) path vector
    d) non distance vector
49. An/A .....routing scheme is designed to enable switches to react to changing traffic patterns on the network.
    a) static routing
    b) fixed alternative routing
    c) **standard routing**
    d) dynamic routing
50. The Routing Information Protocol(RIP) is an intra domain routing based on .....routing.
    a) **distance vector**
    b) link state

c) path vector
d) distance code

51. In ..... routing the least cost route between any two nodes is the minimum distance.
    a) path vector
    b) **distance vector**
    c) link state
    d) switching
52. For centralized routing the decision is made by some designated node called.....
    a) designated center
    b) control center
    c) network center
    d) **network control center**
53. For purposes of routing, the Internet is divided into .....
    a) wide area networks
    b) autonomous networks
    c) local area networks
    d) **autonomous system**

54. In ..... a route is selected for each destination pair of nodes in the network.
    a) Flooding
    b) variable routing
    c) **fixed routing**
    d) random routing
55. To create a neighborhood relationship, a router running BGP sends an ..... message.
    a) Open
    b) **Update**
    c) keep alive
    d) close
56. The technique which requires no network information required is ....
    a) **Flooding**
    b) variable routing
    c) fixed routing
    d) random routing
57. An area is ....
    a) **part of an AS**
    b) composed of at least two AS
    c) another term for an AS

d) composed more than two AS

58. Which of the following produces high traffic network?
    a) Variable routing
    b) **Flooding**
    c) Fixed routing
    d) Random routing
59. In ..... routing, we assume that there is one node (or more) in each autonomous system that acts on behave of the entire autonomous system.
    a) distant vector
    b) **path vector**
    c) link state
    d) multipoint
60. When a direct delivery is made, both the deliverer and receiver have the same ....
    a) routing table
    b) host id
    c) IP address
    d) **Net id**
61. In OSPF, a ..... link is a network with several routers attached to it.
    a) point-to-point
    b) **transient**
    c) stub
    d) multipoint
62. In ..... routing, the mask and the destination address are both 0.0.0.0 in routing table.
    a) next-hop
    b) host-specific
    c) network-specific
    d) **default**
63. In ..... the router forwards the receive packet through only one of its interfaces.
    a) Unicasting
    b) **Multicasting**
    c) Broadcasting
    d) point to point
64. Which of the following is false with respect to TCP?
    a) Connection-oriented
    b) Process-to-process

c) Transport layer protocol
d) Unreliable

65. TCP groups a number of bytes together into a packet called _____
a) Packet
b) Buffer
c) Segment
d) Stack

66. Communication offered by TCP is _____
a) Full-duplex
b) Half-duplex
c) Semi-duplex
d) Byte by byte

67. The receiver of the data controls the amount of data that are to be sent by the sender is referred to as _____
a) Flow control
b) Error control
c) Congestion control
d) Error detection

68. Size of TCP segment header ranges between _____
a) 16 and 32 bytes
b) 16 and 32 bits
c) 20 and 60 bytes
d) 20 and 60 bits

69. Connection establishment in TCP is done by which mechanism?
a) Flow control
b) Three-Way Handshaking
c) Forwarding
d) Synchronization

70. Which of the following is false with respect to UDP?
a) Connection-oriented
b) Unreliable
c) Transport layer protocol
d) Low overhead

71. What is the main advantage of UDP?
a) More overload
b) Reliable
c) Low overhead
d) Fast

72. What is the header size of a UDP packet?
a) 8 bytes

b) 8 bits
c) 16 bytes
d) 124 bytes

73. The _____ field is used to detect errors over the entire user datagram.
a) udp header
b) checksum
c) source port
d) destination port

74. Number of logical ports ranges from _____ to _____
a) 0, 255
b) 1, 65535
c) 1, 65536
d) 0, 65536

75. Which of the following is the port number for FTP data?
a**) 20**
b) 21
c) 22
d) 23

76. Which of the following is the port number for HTTP?
a) 79
b) 80
c) 81
d) 82