BSC. Information technology
Class: SYIT
SEM III
Computer Networks
Sample Questions

Multiple choice questions

1) In_____, the communication is unidirectional
   a. Half-Duplex
   b. Full-Duplex
   c. Simplex mode
   d. Hybrid mode
2) _____both stations can transmit and receive simultaneously.
   a. half-duplex mode
   b. Full-Duplex
   c. simplex mode
   d. Hybrid mode
3) _____establishes, maintains, and synchronizes the interaction among communicating systems.
   a. Data link layer
   b. Transport layer
   c. Physical layer
   d. Session layer
4) In a _____every device has a dedicated point-to-point link to every other device.
   a. Bus topology
   b. Star topology
   c. Ring topology
   d. mesh topology
5) In _____is the dependency of the whole topology on one single point
   a. Bus topology
   b. Star topology
   c. Ring topology
   d. mesh topology
6) In a_____ topology each device has a dedicated point to point connection with exactly two other neighbours
   a. Bus topology
   b. Star topology
   c. Ring topology
   d. mesh topology
7) _____refers to the variation in the packet arrival time
   a. Delivery
   b. Accuracy.
   c. Jitter
   d. Timeliness

8) _____are designed to allow resources to be shared between personal computers or workstations
   a. WAN
   b. LAN
   c. MAN
   d. PAN
9) The OSI model is composed of _____ordered layers.
   a. Seven
   b. Five
   c. Three
   d. Eight
10) _____ defines the procedures and functions that physical devices and interfaces have to perform for transmission to Occur.
   a. Data link layer
   b. Transport layer
   c. Physical layer
   d. Network layer
11) A _____is a set of devices (often referred to as *nodes)* connected by communication links.
   a. protocol
   b. network
   c. standard
   d. internet
12) _____means that the sender transforms the original information to another form and sends the resulting message out over the network
   a. Encryption
   b. Decryption
   c. Privacy
   d. Security
13) The _____is responsible for providing services to the user.
   a. Application layer
   b. Transport layer
   c. Physical layer
   d. Network layer
14) The _____is used to associate a logical address with a physical address.
   a. Reverse Address Resolution Protocol (RARP)
   b. Address Resolution Protocol (ARP)
   c. Transmission Control Protocol (TCP)
   d. User Datagram Protocol (UDP)
15) The _____divides the stream of bits received from the network layer into manageable data units called frames.
   a. Data link layer
   b. Transport layer
   c. Physical layer
   d. Network layer

16) The sine wave is the most fundamental form of _____ signal
    a. A non periodic
    b. An periodic
    c. a composite
    d. analog
17) _____means that the signal changes its form or shape
    a. Transmission
    b. Attenuation
    c. Distortion
    d. Error
18) On a time domain plot the _____ of signal is the vertical value.
    a. Amplitude
    b. Period
    c. Frequency
    d. Phase
19) The value of sine wave is at time zero is its maximum positive value.The phase shift is therefore _____ degrees.
    a. 0
    b. 90
    c. 180
    d. 270
20) Rz is _____ encoding method
    a. Unipolar
    b. Bipolar
    c. Polar
    d. Manchester
21) AMI stands for
    a. Alternate making interference
    b. Alternate mark inversion
    c. Alternate mark intension
    d. Alternate mark invention
22) In bipolar encoding, uses _____ level in line coding.
    a. Negative, negative
    b. Positive, zero, and negative
    c. Positive, positive
    d. Positive, negative
23) The idea of _____ and the idea of_____ are combined into the Manchester scheme.
    a. NRZ and RZ
    b. RZ and AMI
    c. RZ and NRZ-L
    d. NRZ-L and NRZ-I
24) To change an analog signal to digital data (digitization) is called _____
    a. Amplitude modulation(AM)
    b. Frequency modulation(FM)
    c. Phase modulation (PM)

d. pulse code modulation (PCM)

25) _____scheme in which the positive voltage defines bit 1 and the zero voltage defines bit O.
   a. return-to-zero(RZ)
   b. non-return-to-zero (NRZ)
   c. Bipolar
   d. AMI

26) The signals which are obtained by encoding each quantized signal into a digital word is called as_____
   a. PAM signal
   b. PCM signal
   c. FM signal
   d. Sampling and quantization time

27) The sequence of operations in which PCM is done is_____
   a. Sampling, quantizing, encoding
   b. Quantizing, encoding, sampling
   c. Quantizing, sampling, encoding
   d. Sampling,encoding,quantizing

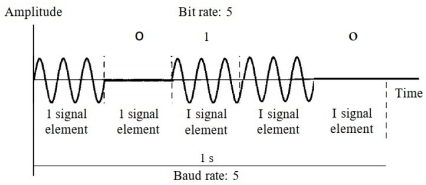
28) In digital transmission, the modulation technique that requires minimum bandwidth is
   a. PCM
   b. DPCM
   c. Delta modulation
   d. PAM

29) In _____ transmission *n* bits of data at a time
   a. Serial
   b. Parallel
   c. Synchronous
   d. Asynchronous

30) _____transmission is usually limited to short distances
   a. Serial
   b. Parallel
   c. Synchronous
   d. Asynchronous

31) In_____ type of transmission there is 1 start bit (0) at the beginning and 1 or more stop bits (Is) at the end of each byte and a gap between each byte.
   a. Asynchronous
   b. synchronous
   c. virtual
   d. parallel

32) In _____ bits are sent one after another without start or stop bits or gaps
   a. Virtual transmission
   b. Serial transmission
   c. Asynchronous transmission
   d. Synchronous transmission

33) 

a. Above fig represent what type of digital to analog conversion
b. ASK
c. PSK
d. FSK
e. TSK

34) In_____ the frequency of the carrier signal is varied to represent data.

a. frequency shift keying
b. Amplitude shift keying
c. Time shift keying
d. Phase shift keying

35) The sharing of a medium and its link by two or more devices is called _____

a. Fully duplexing
b. Multiplexing
c. Micropleixng
d. Duplexing

36) In this type of multiplexing time slots are preassigned to sources and fixed.

a. TDM
b. Synchronous TDM
c. Asynchronous TDM
d. FDM

37) _____ is an analog technique that can be applied when the bandwidth of a link (in hertz) is greater than the combined bandwidths of the signals to be transmitted.

a. Frequency-division multiplexing (FDM)
b. Time-Division Multiplexing(TDM
c. Wavelenght division multiplexing(WDM)
d. Phase division Multiplexing(PDM)

38) Wavelength division multiplexing is same as _____

a. TDM
b. FDM
c. DWDM
d. PDM

39) _____ utilization achieve specific goals.

a. Frequency
b. Bandwidth
c. Amplitude
d. Phase

40) The technique that uses M different carrier frequencies that are modulated by the source signal is _____
    a. Multiplexing
    b. Spreading
    c. FHSS
    d. DSSS
41) In _____ transmission, bits are transmitted simultaneously, each across its own wire.
    a. Asynchronous serial
    b. Synchronous serial
    c. Parallel
    d. Serial
42) What does UTP stands for?
    a. Unshielded Twisted pair
    b. Uniformly twisted pair
    c. Unshielded Connecter pair
    d. unshielded trasport pair

43) _____ cable consists of an inner copper core and a second conducting outer sheath.

    a. Twisted-pair
    b. Coaxial
    c. Fiber-optic
    d. Shielded twisted-pair

44) In fiber optics, the signal is _____ waves.
    a. light
    b. radio
    c. infrared
    d. very low-frequency

45) In an optical fiber, the inner core is _____ the cladding.
    a. denser than
    b. less dense than
    c. the same density as
    d. another name for
46) The inner core of an optical fiber is _____ in composition.
    a. glass or plastic
    b. copper
    c. bimetallic
    d. liquid
47) Loss in signal power as light travels down the fiber is called?
    a. Attenuation
    b. Propagation
    c. Scattering
    d. Interruption
48) _____ is a communication channel that carries the information from the sender to the receiver.
    a. Topology

b. Server
c. Transmission Mode
d. Transmission Media

49) In a _____ network, two types of addressing are involved: global and local.

a. datagram
b. virtual-circuit
c. circuit-switched
d. packet

50) Reliable communication means_____
a. Errors must be detected not corrected
b. Error must be corrected not detected
c. Error must me kept as it is
d. Error must be detected and corrected.

51) For even parity after adding the redundant bot the number of 0s____
a. 0s should be even
b. 0s should be odd
c. 1s should be even
d. 1s should be odd

52) In a_____code the exclusive OR (XOR) of any two valid codewords creates another valid codeword.
a. linear block code
b. linear division code
c. linear multiplication code
d. linear addition code

53) In _____ configuration an HDLC primary station and several secondary stations are connected
a. An asymmetrical
b. A balanced
c. An unbalanced
d. A symmetrical

54) An HDLC_____ can transport system management information,
a. I-Frame
b. S-Frame
c. U-Frame
d. A-Frame

55) The HDLC tag field is_____
a. 01000010
b. 01010101
c. 10000001
d. 01111110

56) The access methods are categorized into _____ groups
a. 1
b. 2
c. 3
d. 4

57) _____ requires that each station first listen to the medium before sending

a. MA
b. CDMA
c. CSMA
FDMA

58) In _____ methods the stations consult one another to find which station has right to send

a. Channelization
b. Random Access
c. Controlled access
d. Priority access

59) In the _____ method the stations are organised in logical ring

a. Reservation
b. Polling
c. Token passing
d. Requesting

60) In _____ each station sends a frame whenever it has a frame to send.

a. Pure ALOHA
b. Slotted ALOHA
c. CDMA
d. CSMA

61) To minimize the chance of collision and, therefore, increase the performance, the _____method was developed.

a. Aloha
b. TDMA
c. FDMA
d. CSMA

62) In _____method, after the station finds the line idle, it sends its frame immediately.

a. Nonpersistent
b. I-persistent method
c. p-Persistent
d. U-persistent

63) In the _____ method, each station has a predecessor and a successor.

a. token passing
b. polling
c. reservation
d. random Access

64) In the _____method, a station that has a frame to send senses the line. If the line is idle, it sends immediately. If the line is not idle, it waits a random amount of time and then senses the line again.

a. 1-persistent

b. nonpersistent
c. p-persistent
d. u-persistent

65) What happens if two devices on the same Ethernet network determine the network is free, but attempt to transmit data at exactly the same time.
a. overlap
b. crossover
c. collision
d. connection

66) The_____ function is used whenever the primary device has something to send in polling method
a. Select
b. Poll
c. Request
d. Response

67) TDMA is a multiple access technique that has
a. Different users in different time slots
b. Each user is assigned unique frequency slots
c. Each user is assigned a unique code sequence
d. Each signal is modulated with frequency modulation technique

68) In _____the bandwidth is just one channel that is timeshared between different stations.
a. FDMA
b. TDMA
c. CDMA
d. PDMA

69) 1000Base-SX, 1000Base-LX, and 1000Base-CX use _____ block coding and _____ line coding.

a. 8B/10B; NRZ
b. 4B/5B; NRZ
c. 8B/10B; MLT-3
d. 4B/5B; MLT-3

70) _____ uses two fiber-optic cables.

a. 100Base-FX
b. 100Base-T4
c. 100Base-TX
d. 100base-CX

71) Each station on an Ethernet network has a unique _____ address imprinted on its network interface card (NIC).

a. 48-bit
b. 32-bit
c. 5-byte

d. 1-byte

72) Gigabit Ethernet has a data rate of _____Mbps.

a. 10,000
b. 1000
c. 100
d. 10

73) In the Ethernet frame, the _____ field contains error detection information.

a. address
b. preamble
c. CRC
d. checksum

74) In 10BAse2 cable is

a. thick
b. thin
c. twisted pair cable
d. coaxial able

75) NIC stand for

a. network interface card
b. national internet code
c. network isolated card
d. network international code

76) In IEEE 802.11, a BSS without an AP is called an _____.

a. an infrastructure network
b. an ad hoc architecture
c. a pipeline architecture
d. a wireless architecture

77) A device that connects networks with different protocols –

a. Switch
b. Hub
c. Gateway
d. router

78) A device that is used to connect a number of LANs is _____

a. Router
b. Repeater
c. Bridge
d. Hub

79) The address space of IPv4 is_____

a. 2^{48}
b. 2^{32}
c. 2^{16}
d. 2^{128}

80) Change the following IPv4 addresses from binary notation to dotted-decimal notation.11000001 10000011 00011011 11111111

a. 193.131.27.255
b. 111.56.45.78
c. 221.34.7.82
d. 129.11.11.239

81) Change the following IPv4 addresses from dotted-decimal notation to binary notation.

i. 111.56.45.78

a. 11011101 00100010 00000111 01010010
b. 01101111 00111000 00101101 01001110
c. 10000100 00111000 00000111 01010010
d. 11010001 11010001 01010100 11010010

82) Identify the class of the following IPv4 address: 4.5.6.7.

a. A
b. B
c. C
d. D

83) Find the number of addresses in a block of classless addresses if one of the addresses is 12.2.2.7/24.

a. 32
b. 64
c. 256
d. 224

84) What is the default mask for class A in CIDR notation?

a. /9
b. /8
c. /16
d. /24

85) Identify the class of the following IPv4 address: 191.1.2.3.

a. A
b. B
c. C
d. D

86) In IPv6, _____ address defines a group of computers.

a. a unicast
b. a multicast
c. an anycast
d. a broadcast

87) The number of addresses assigned to an organization in classless addressing _____.

a. can be any number
b. must be a multiple of 256
c. must be a power of 2
d. must be divisible by 4

88) In IPv4, class _____ has the greatest number of addresses in each block.
a. A
b. B
c. C
d. D

89) An IPv6 address consists of _____ bytes (octets);
a. 4
b. 8
c. 16
d. 2

90) What is the first address of a block of classless addresses if one of the addresses is 12.2.2.76/27?
a. 12.2.2.0
b. 12.2.2.32
c. 12.2.2.64
d. 12.2.2.3

91) Which of the following is not a transition strategy?
a. Dual stack
b. Tunneling
c. Conversion
d. Header translation

92) In unicast routing the protocol that is an implementation of the distance vector protocol is called as
a. Border gateway protocol
b. Routing information protocol
c. Open shortest path first protocol
d. Reverse Address resolution protocol

93) A_____ routing table contains information entered manually.
a. A static
b. A dynamic
c. A hierarchical
d. A physical

94) _____ is a group of networks and routers under the authority of single administration.
a. An autonomous system
b. An area
c. A router
d. A domain

95) Routing inside an autonomous system is referred as_____
a. Interdomain routing
b. Intradomain routing
c. Direct routing
d. Indirect routing

96) In distance vector routing each node periodically shares its routing table with its _____whenever there is change.

a. Every other node
b. Its immediate neighbour
c. One neighbour
d. No one

97) The _____ routing uses the Dijkstra Algorithm to build a routing table.

a. Distance vector
b. Path vector
c. Link state
d. Min distance

98) The _____ protocol allows the administrator to assign cost ,called metric to each route

a. OSPF
b. RIP
c. BGP
d. IP

99) The _____ Protocol has neither flow nor error control.

a. Selective-Repeat ARQ
b. Go-Back-N ARQ
c. Stop-and-Wait
d. Simplest

100) In the _____ protocol we avoid unnecessary transmission by sending only frames that are corrupted.

a. Selective-Repeat ARQ
b. Stop-and-Wait ARQ
c. Go-Back-N ARQ
d. Simplest