

SECTION B

- 1.** Routing delay from a source to destination depends on
 - a.** The number of nodes within the network
 - b.** The bandwidth of the intermediate network link
 - c.** The bit rate of each of the network link
 - d.** The parity bit and the error rate

- 2.** _____ and _____ are some of the metrics used by routing protocols.
 - a.** Path length and bandwidth
 - b.** Grooming and concentration processes
 - c.** Fibre optic cables and modems
 - d.** TCP/IP protocols and network usage

- 3.** Demodulation is a means for
 - a.** Extracting data from an analogue/digital from a source to a destination
 - b.** Eliminating noise from and interference from a transmitted signal
 - c.** Extracting information form radio frequency signal from source to destination
 - d.** Shielding electromagnetic and digital signals from a source or destination

- 4.** A series of bits containing data and control information including source and destination node address formatted for transmission from one node to another are
 - a.** Serially transmitted signals
 - b.** Parallel transmitted signals
 - c.** Concentrated packets
 - d.** Demodulated signals

- 5.** A bridge device
 - i.** Filters data traffic at the network boundary
 - ii.** Reduces the amount of traffic on a LAN by dividing it into segments
 - iii.** Operate at the data link layer of the OSI model
 - iv.** Operate at the transport layer of the OSI model
 - a.** I, II, III
 - b.** I, III, IV
 - c.** II, III, IV
 - d.** I, II, IV

- 6.** A transmitted signal that has been groomed will contain signals
 - a.** Of same type and free from empty packets
 - b.** That will not require multiplexing techniques to transmit

- c.** That will not need any modem to transmit
 - d.** That will need fiber optic cables and wireless equipment to transmit
- 7.** The strength of an analogue signal is normally reduced after transmission through a long distance, this signal can be boosted up to its original strength by a
- a.** repeater
 - b.** concentrator
 - c.** grooming equipment
 - d.** a strong magnetic field
- 8.** The physical layer provides connectivity between
- a.** network devices
 - b.** presentation layer and the network layer
 - c.** data bus and the address bus
 - d.** control bus and the address bus
- 9.** The function of the transport layer includes
- I.** communication with the session layer
 - II.** communication with the CPU
 - III.** detect errors and prevent loss of data
 - IV.** management of connectivity and routing between host and the network
- a.** I, II, IV
 - b.** I, III, IV
 - c.** I, II, III
 - d.** II, III, IV
- 10.** The session layer performs function as
- a.** Organized and manage one or connections per application between hosts
 - b.** Reassemble transport protocol data unit into data stream
 - c.** Communicate with the data link layer
 - d.** Prevention of virus attacks on the network
- 11.** The function of the presentation layer includes
- a.** Transmission of data from cross-platform standards into formats understood by the local machine
 - b.** Displaying data and images to the user in a human-recognizable format and to interface with the presentation layer
 - c.** Keeping track of individual connections to remote sources
 - d.** Keeping track of all hackers and spammers on the network
- 12.** The point-to-point protocol (PPP) can be used to
- a.** Encapsulate and transmit internet protocol (IP) datagram

- b.** Authenticate servers
- c.** Identify switched signals

13. A major source of jitter noise lies in the

- a.** Process of transmission through channels with small bandwidth
- b.** Process of digital regeneration through repeater
- c.** Choice of multiplexing techniques
- d.** The type of downlink and uplink procedure in use

14. A transmitted signal that has been groomed will contain signals

- a.** Of the type and free form empty packets
- b.** That will not require multiplexing technique to transmit
- c.** That will not need any mode to transmit
- d.** That will need optic cable and wireless equipment to transmit

15. When signals are transmitted through a concentrator

- a.** All noise or unwanted signals are removed
- b.** Empty spaces between the data packets are removed
- c.** Signals are sorted out so that signals of the same kind are grouped together
- d.** Signals will be circuit-switched and forward transmission

16. Which of the following cannot cause a routing delay when signals are transmitted

- a.** Bandwidth of the channel
- b.** The total number of nodes within the network
- c.** The type of multiplexing technique used
- d.** The location of the transmitter

17. In multicast transmission, the message is directed to

- a.** Peer-to-peer link only
- b.** A group of host that can choose to participate
- c.** Dedicated host only
- d.** Network bridge

18. Network bridge

- a.** Reduces the size of the collision domain by micro-segmentation in a non-switched networks
- b.** Do not reduce the size of the collision domain micro-segmentation in a non-switched networks
- c.** Multiplexes all transmitted signals
- d.** Do not minimize bandwidth usage

- 19.** The data link layer is concerned with
- a.** Fragmentation of data into frames
 - b.** Reassembly of frames into using frequency division multiplexing
 - c.** Physical addressing, physical link management and flow control
 - d.** Compression of packets into bytes
- 20.** The presentation layer performs functions such as
- a.** Keeping track of individuals to remote servers
 - b.** Transmission of data configuring to cross-platform standards into formats understood by the local machine
 - c.** recovering lost data
 - d.** checking data error
- 21.** Dynamic routing uses routing protocols which enable the router
- I.** Reach agreement with other routers about the network topology
 - II.** Calculates routes
 - III.** Assign MAC addresses to nodes at both the source and destination
 - IV.** Distribute routing update to other routers
- a.** I, II, IV
 - b.** I, III, IV
 - c.** I, II, III
 - d.** I, III, IV
- 22.** _____ is an advantage of using a FM signal transmission
- a.** Immunity to noise on the transmission medium
 - b.** Modification of the amplitude
 - c.** Using only one frequency
 - d.** The signal power is improved
- 23.** The degree of noise reduction in a twisted pair cable (shielded and unshielded) is determined by the
- a.** Thickness of the wire
 - b.** The number of turns pair meter
 - c.** The conductivity of the wire
 - d.** The resistant of the wire to transmission impairments
- 24.** An unshielded twisted pair cable is used on
- a.** Ethernet 10BaseT cabling system
 - b.** Token ring cabling system
 - c.** ICS-IBM cabling system
 - d.** Multi-protocol transmission only
- 25.** A step-index which is an optical transmission mode has
- a.** A large core and the light rays reflects off the cladding

- b.** A small core and the light rays reflects into the cladding
- c.** A large core and some of the light rays reflects off the cladding and others take a direct path
- d.** A small core the light rays reflects at an angle greater than the refractive index

26. In graded-index optical transmission mode

- a.** The light rays are gradually to the core path due to gradual change in the core refractive index
- b.** The light rays reflects through the core completely
- c.** The light rays are never reflected
- d.** The light rays are transmitted by fast fiber optic cable

27. A single-mode optical transmission has

- a.** A small core the light rays reflects off the cladding
- b.** The light rays reflects into the cladding
- c.** The light rays are never reflected
- d.** A small core the light rays reflects at an angle greater than the refractive index of the wire

28. In a master transmission hold-down timer is triggered upon an event to

- a.** Update a internet routing excluding the network status has changed
- b.** There are no signals is transmitted
- c.** The nodes along the transmission transmit faulty
- d.** The message arrives at the destination out of sequence

29. An optical fiber cable has more immunity to

- a.** Radio frequency interference (RFI) and electromagnetic interference
- b.** Thermal noise
- c.** Jitter noise
- d.** Induced noise from satellite equipment

30. _____ is a kind of advantage for using an optical fiber cable

- a.** Physical vibration showing up as a signal noise
- b.** Range of physical size of the cable
- c.** High refraction index
- d.** Immunity to cross talk

- 31.** Signal transmission by AM radio is an example of
- a.** Satellite propagation
 - b.** Light wave propagation
 - c.** Ground wave propagation
 - d.** One of the propagation
- 32.** _____ operates in the frequency range of 30MHz - 300MHz
- a.** Ground wave propagation
 - b.** Light wave propagation
 - c.** Ionosphere propagation
 - d.** Satellite propagation
- 33.** Microwaves operates at high frequencies of 3MHz - 30MHz due to
- a.** High transmission properties
 - b.** Unreliable signals
 - c.** Size of the elements that make up the microwave
 - d.** The location
- 34.** Microwaves can carry large quantity of information because
- a.** They can transmit weaker signals with high frequency
 - b.** They are immune to noise
 - c.** They transmit both analogue and digital signals
- 35.** Satellites can carry high quantity of information because
- a.** They can transmit weaker signals with low frequency
 - b.** They operate at high temperature
 - c.** They transmit both analogue and digital signals
 - d.** They are placed in the orbit of the earth
- 36.** _____ is the shadow that a satellite transmits
- a.** Transmission spectrum
 - b.** Footprint
 - c.** Downlink
 - d.** Uplink
- 37.** In message switching, it is not necessary to establish a
- a.** Dedicated line
 - b.** Call set up
 - c.** Call initiation
 - d.** Session

- 38.** Which of the following is not part of the switching process in PSTN
- a.** Circuits disconnect
 - b.** Interference from external
 - c.** Circuits establishment
 - d.** Call set-up
- 39.** The communication between a satellite in space and a receiver on earth is an example of
- a.** Broadcast communication and downlink transmission
 - b.** Half duplex multicast transmission
 - c.** Full duplex and multicast transmission
 - d.** Half duplex and broadcast
- 40.** The communication between a radio station and their listeners is an example of
- a.** Simplex transmission
 - b.** Half duplex transmission
 - c.** Full duplex transmission
 - d.** An asynchronous transmission
- 41.** A serial transmission conveys messages in
- a.** Frame by frame
 - b.** One bit at a time
 - c.** One packet at a time
 - d.** Light byte at a time
- 42.** A carrier frequency of a signal is chosen for reasons such as
- a.** Signal bandwidth
 - b.** Signal frequency spectrum and transmission channel
 - c.** a and b
 - d.** Signal switching and bandwidth
- 43.** In a source route bridging
- a.** single route frames are used to make up most of the network traffic while all route frames are used to find routes
 - b.** end route frames are mostly used while all route frames are used to find IP address of the destination
 - c.** the forwarding database is normally empty
 - d.** a forwarding database is used to send frames send across the network
- 44.** Frequency modulation is less affected by noise and it is preferable to Amplitude modulation because the information is contained in

- a. frequency and time
- b. frequency
- c. frequency and phase
- d. frequency and amplitude

45. In a message switching process it is not necessary to establish

- a. dedicated line
- b. a call set up
- c. a call initiation
- d. a modem within the set up

46. Signals undergoing circuit switching does not require

- a. transmission medium
- b. dedicated line
- c. repeaters
- d. modems

47. Which of the following is not a disadvantage of transmitting signals using a microwave

- a. it suffers attenuation by solid objects, birds, trees, rain, snow and fog
- b. signals are refracted by atmosphere, then causing beam to be projected away from receiver
- c. it is affected by cross talk
- d. it is affected by the downlink bandwidth

48. Microwave transmission is a line of sight transmission therefore

- a. the transmit station must be in visible contact with the receive station
- b. the transmit station must be shielded away from the receive station
- c. signal communications between a radio station and its listeners is an example of
- d. Simplex communication

49. Signal communications between a radio station and its listeners is an example of

- a. Simplex communication
- b. Half duplex communication
- c. Full duplex communication
- d. Terrestrial communication

50. Which of the following is not part of the process of switching in a PSTN?

- a. Interference from external sources
- b. Circuit establishment
- c. Circuit disconnect
- d. Transmission of data

SECTION A

**ANSWER THE QUESTIONS IN THIS SECTION ON THE QUESTION PAPER.
ANSWER ALL QUESTIONS IN THIS SECTION BY FILLING IN THE BLANK
SPACES on the QUESTION PAPER.**

1. Routing delay from a source to destination depends on _____.
2. _____ and _____ are some of the metrics used by routing protocols.
3. Demodulation is a means _____.
4. A series of bits containing data and control information including source and destination node address formatted for transmission from one node to another are _____.
5. The degree of noise reduction in a twisted pair cable (shielded and unshielded) is determined by the _____.
6. A parity bit is added to a data packet for the purpose of _____.
7. The strength of an analogue signal is normally reduced after transmission through a long distance, this signal can be boosted up to its original strength by _____.
8. A transmitted signal that has been groomed will contain signals of _____.
9. A major source of jitter noise lies in process of digital regeneration through _____.
10. In message switching, it is not necessary to establish a _____.

