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 _____number of nodes within the network_____.

2._____Path length_____ and _____Bandwidth_____ are some of the metrics used by routing protocols.

3. Demodulation is a means _____Extracting information from radio frequency signal from source to 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 _____packets_____.

5. The degree of noise reduction in a twisted pair cable (shielded and unshielded) is determined by the _____number of twists per meter_____.

6. A parity bit is added to a data packet for the purpose of _____error checking_____.

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 repeater_____.

8. A transmitted signal that has been groomed will contain signals of _____Of the same type and free from empty packets_____

9. A major source of jitter noise lies in process of digital regeneration through _____Process of digital regeneration through repeater_____.

10. In message switching, it is not necessary to establish a _____dedicated line_____.