

MULTIPLE CHOICE QUESTIONS IN DATA COMMUNICATIONS AND NETWORKING

A Complete Chapter Quiz

Multiple Access

Compilation of all the quizzes (MCQs) for each and every chapters in the book of Data Communications and Networking 4th Edition by Behrouz A. Forouzan.

1. In _____, the stations share the bandwidth of the channel in time.

A) [FDMA](#)

B) [CDMA](#)

C) [TDMA](#)

D) none of the above

2. In _____, the chance of collision can be reduced if a station senses the medium before trying to use it.

A) [CSMA](#)

B) MA

C) CDMA

D) FDMA

3. In the _____ method, the stations in a network are organized in a logical ring.

A) polling

B) [token passing](#)

C) reservation

D) none of the above

4. In _____, the sequences are generated using orthogonal codes such as the Walsh tables.

A) TDMA

B) [CDMA](#)

C) FDMA

D) none of the above

5. _____ augments the CSMA algorithm to detect collision.

A) [CSMA/CD](#)

B) CSMA/CA

C) either (a) or (b)

D) both (a) and (b)

6. In the _____ method, after the station finds the line idle, it sends its frame immediately. If the line is not idle, it continuously senses the line until it finds it idle.

A) p-persistent

B) nonpersistent

C) [1-persistent](#)

D) none of the above

7. In the _____ method, time is divided into intervals. In each interval, a reservation frame precedes the data frames sent in that interval.

A) token passing

B) [reservation](#)

C) polling

D) none of the above

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

A) [token passing](#)

B) polling

C) reservation

D) none of the above

9. The vulnerable time for CSMA is the _____ propagation time.

A) three times

B) two times

C) [the same as](#)

D) none of the above

10. In the _____ method, a special packet called a _____ circulates through the ring.

A) polling: poll request

B) [token passing: token](#)

C) reservation: control frame

D) none of the above

11. The maximum throughput for pure [ALOHA](#) is _____ per cent.

A) 36.8

B) [18.4](#)

C) 12.2

D) none of the above

12. In _____, the available bandwidth is divided into frequency bands.

- A) TDMA
 B) CDMA
C) FDMA
 D) none of the above
13. In _____ methods, no station is superior to another station and none is assigned the control over another.
 A) controlled access
B) random access
 C) channelization
 D) none of the above
14. 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) none of the above
15. In _____, each station is allocated a band to send its data. In other words, each band is reserved for a specific station, and it belongs to the station all the time.
 A) CDMA
B) FDMA
 C) TDMA
 D) none of the above
16. In the _____ method, after the station finds the line idle it sends or refrain from sending based on the outcome of a random number generator. If the line is busy, it tries again.
A) p-persistent
 B) nonpersistent
 C) 1-persistent
 D) none of the above
17. To avoid collisions on wireless networks, _____ was invented.
 A) CSMA/CD
B) CSMA/CA
 C) either (a) or (b)
 D) both (a) and (b)
18. In _____, each station is allocated a time slot during which it can send data. Each station transmits its data in its assigned time slot.
A) TDMA
 B) CDMA
 C) FDMA
 D) none of the above
19. In the _____ method, the primary device controls the link; the secondary devices follow its instructions.
 A) token passing
 B) reservation
C) polling
 D) none of the above
20. In _____, each station transmits its data in its assigned time slot.
A) TDMA
 B) CDMA
 C) FDMA
 D) none of the above
21. We discussed _____ channelization protocols.
 A) four
B) three
 C) two
 D) none of the above
22. In the _____ method, all data exchanges must be made through the primary device even when the ultimate destination is a secondary device.

- A) polling
B) token passing
C) reservation
D) none of the above
23. We discussed _____ popular controlled-access methods.
A) four
B) three
C) two
D) none of the above
24. In _____, each station is forced to send only at the beginning of the time slot.
A) pure ALOHA
B) slotted ALOHA
C) both (a) and (b)
D) neither (a) nor (b)
25. In _____ methods, the stations consult one another to find which station has the right to send.
A) channelization
B) random access
C) controlled access
D) none of the above
26. In _____ each station sends a frame whenever it has a frame to send.
A) slotted ALOHA
B) pure ALOHA
C) both (a) and (b)
D) neither (a) nor (b)
27. In _____, the stations use different codes to achieve multiple access.
A) CDMA
B) TDMA
C) FDMA
D) none of the above
28. In _____, collisions are avoided through the use of three strategies: the

interframe space, the contention window, and acknowledgments.

- A) CSMA/CD
B) CSMA/CA
C) either (a) or (b)
D) both (a) and (b)
29. In the _____ method, a station needs to make a reservation before sending data. Time is divided into intervals.
A) token passing
B) polling
C) reservation
D) none of the above
30. In pure ALOHA, the vulnerable time is _____ the frame transmission time.
A) two times
B) three times
C) the same as
D) none of the above
31. The maximum throughput for slotted ALOHA is _____ per cent.
A) 36.8
B) 18.4
C) 12.2
D) none of the above
32. _____ is a multiple-access method in which the available bandwidth of a link is shared in time, frequency, or through code, between different stations.
A) Controlled access
B) Channelization
C) Random access
D) none of the above
33. _____ requires that each station first listen to the medium before sending.
A) FDMA
B) CDMA

C) MA

D) CSMA

34. We have categorized access methods into _____ groups.

A) five

B) three

C) four

D) two

35. In _____ methods, a station cannot send unless it has been authorized by other stations.

A) controlled access

B) channelization

C) random access

D) none of the above

36. In slotted ALOHA, the vulnerable time is _____ the frame transmission time.

A) two times

B) three times

C) the same as

D) none of the above

37. In _____, a station monitors the medium after it sends a frame to see if the transmission was successful. If so, the station is finished. If, however, there is a collision, the frame is sent again.

A) CSMA/CD

B) CSMA/CA

C) either (a) or (b)

D) both (a) and (b)

38. _____ is based on coding theory and uses sequences of numbers called chips.

A) TDMA

B) CDMA

C) FDMA

D) none of the above