All the Multiple Choice Question and Answer (MCQs) have been compiled from the books of Data Communication and Networking by the well known author behrouz A forouzan.

This Data Communication and Networking – **Connecting LANs, Backbone Networks, and Virtual LANs** multiple choice Questions and Answers (MCQ) PDF covers the below lists of topics.

1. IEEE 802.11 standard for wireless LANs Multiple Choice Question and Answer.
2. Physical layer methods Multiple Choice Question and Answer.
3. Frequency-hopping spread spectrum (FHSS) Multiple Choice Question and Answer.
4. Direct sequence spread spectrum (DSSS) Multiple Choice Question and Answer.
5. Orthogonal frequency-division multiplexing (OFDM) Multiple Choice Question and Answer.
6. High-rate direct sequence spread spectrum (HR-DSSS) Multiple Choice Question and Answer
7. Bluetooth network Multiple Choice Question and Answer

Practice now to sharpen your concept.

1. A repeater is a connecting device that operates in the _____ layer of the Internet model.
A. physical
B. data link
C. network
D. all of the above

2. A _____ regenerates a signal, connects segments of a LAN, and has no filtering capability.
   A. repeater
   B. bridge
   C. router
   D. none of the above

3. A _____ is a connecting device that operates in the physical and data link layers of the Internet model.
   A. repeater
   B. bridge
   C. router
   D. none of the above

4. A _____ bridge can forward and filter frames and automatically build its forwarding table.
   A. simple
   B. dual
   C. transparent
   D. none of the above

5. A bridge can use the _____ algorithm to create a loopless topology.
   A. binary tree
   B. spanning tree
   C. multiway tree
   D. none of the above

6. A _____ LAN allows several LANs to be connected.
   A. backbone
   B. wireless

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C. wired

D. none of the above

7. A backbone is usually a _____.

A. bus

B. star

C. either (a) or (b)

D. neither (a) nor (b)

8. A virtual local area network (VLAN) is configured by _____

A. software

B. physical wiring

C. hardware

D. none of the above

9. Membership in a VLAN can be based on _____.

A. port numbers

B. MAC addresses

C. IP addresses

D. all of the above

10. VLANs can_____.

A. reduce network traffic

B. provide an extra measure of security

C. either (a) or (b)

D. both (a) and (b)

Answer key for MCQ SET- 1	
Q-1	Correct Answer :physical

Q-2	Correct Answer :repeater
Q-3	Correct Answer :bridge
Q-4	Correct Answer :transparent
Q-5	Correct Answer :spanning tree
Q-6	Correct Answer :backbone
Q-7	Correct Answer :either (a) or (b)
Q-8	Correct Answer :software
Q-9	Correct Answer :all of the above
Q-10	Correct Answer :both (a) and (b)

Connecting LANs, Backbone Networks, and Virtual LANs MCQ Set-2

1. _____ is just a connector
   A. An active hub
   B. A passive hub
   C. either (a) or (b)
   D. neither (a) nor (b)

2. In a star-topology Ethernet LAN, _____ is just a point where the signals coming from different stations collide; it is the collision point.
   A. An active hub
   B. A passive hub
   C. either (a) or (b)
   D. neither (a) nor (b)

3. _____ is part of the media; its location in the Internet model is below the physical layer.

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A. An active hub
B. A passive hub
C. either (a) or (b)
D. neither (a) nor (b)

4. A _____ is a device that operates only in the physical layer.
   A. passive hub
   B. repeater
   C. bridge
   D. router

5. A _____ receives a signal and, before it becomes too weak or corrupted, regenerates the original bit pattern. It then sends the refreshed signal.
   A. passive hub
   B. repeater
   C. bridge
   D. router

6. A _____ forwards every frame; it has no filtering capability.
   A. passive hub
   B. repeater
   C. bridge
   D. router

7. _____ is actually a multiport repeater. It is normally used to create connections between stations in a physical star topology
   A. An active hub

B. A passive hub
C. either (a) or (b)
D. neither (a) nor (b)

8. A _____ operates in both the physical and the data link layer.
   A. passive hub
   B. repeater
   C. bridge
   D. router

9. A _____ can check the MAC addresses contained in the frame.
   A. passive hub
   B. repeater
   C. bridge
   D. router

10. A _____ has a table used in filtering decisions.
   A. passive hub
   B. repeater
   C. bridge
   D. none of the above

Answer key for MCQ SET- 2	
Q-1	Correct Answer :A passive hub
Q-2	Correct Answer :A passive hub
Q-3	Correct Answer :A passive hub
Q-4	Correct Answer :repeater
Q-5	Correct Answer :repeater

Q-6	Correct Answer :repeater
Q-7	Correct Answer :An active hub
Q-8	Correct Answer :bridge
Q-9	Correct Answer :bridge
Q-10	Correct Answer :bridge

Connecting LANs, Backbone Networks, and Virtual LANs MCQ Set-3

1. A _____ is a device in which the stations are completely unaware of its existence.
   A. passive hub
   B. repeater
   C. simple bridge
   D. transparent bridge

2. IEEE 802.1d specification, defines _____ criteria for a transparent bridges.
   A. two
   B. three
   C. four
   D. none of the above

3. A spanning tree is a graph in which there is no _____.
   A. node
   B. branch
   C. loop
   D. arc

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4. In a bridged LAN, the _____ algorithm creates a topology in which each LAN can be reached from any other LAN through one path only.
    A. spanning tree
    B. binary tree
    C. unary tree
    D. none of the above

5. A three-layer switch is a kind of _____
    A. repeater
    B. bridge
    C. router
    D. none of the above

6. A two-layer switch is a _____.
    A. repeater
    B. bridge
    C. router
    D. none of the above

7. Some new two-layer switches, called _____ switches, have been designed to forward the frame as soon as they check the MAC addresses in the header of the frame
    A. cut-through
    B. go-through
    C. come-through
    D. none of the above

8. A _____ is a three-layer device that handles packets based on their logical addresses.

A. repeater
B. bridge
C. router
D. none of the above

9. A _____ normally connects LANs and WANs in the Internet and has a table that is used for making decisions about the route.
   A. repeater
   B. bridge
   C. router
   D. none of the above

10. A _____ switch is a faster and more sophisticated router.
   A. two-layer
   B. three-layer
   C. four-layer
   D. none of the above

Answer key for MCQ SET- 3	
Q-1	Correct Answer :transparent bridge
Q-2	Correct Answer :three
Q-3	Correct Answer :loop
Q-4	Correct Answer :spanning tree
Q-5	Correct Answer :router
Q-6	Correct Answer :bridge
Q-7	Correct Answer :cut-through
Q-8	Correct Answer :router

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| Q-9 | Correct Answer :router |
| Q-10 | Correct Answer :three-layer |

Connecting LANs, Backbone Networks, and Virtual LANs MCQ Set-4

1. A _____ is normally a computer that operates in all five layers of the Internet model or seven layers of OSI model.
   A. repeater
   B. bridge
   C. router
   D. gateway

2. A _____ can be used as a connecting device between two internetworks that use different models.
   A. repeater
   B. bridge
   C. router
   D. gateway

3. In a _____ backbone, the backbone is just one switch
   A. bus
   B. ring
   C. star
   D. none of the above

4. A _____ link acts as a LAN in a remote backbone connected by remote bridges
   A. point-to-point
   B. multipoint

C. multidrop

D. none of the above

5. VLANs create _____ domains

A. unicast

B. multicast

C. broadcast

D. none of the above

6. In a(n) _____ configuration, the administrator types the port numbers, the IP addresses, or other characteristics, using the VLAN software.

A. manual

B. automatic

C. semiautomatic

D. none of the above

7. In a(n) _____ configuration, the stations are automatically connected or disconnected from a VLAN using criteria defined by the administrator

A. manual

B. automatic

C. semiautomatic

D. none of the above

8. In a(n) _____ configuration, the initializing is done manually, with migrations done automatically.

A. manual

B. automatic

C. semiautomatic

D. none of the above

Answer key for MCQ SET- 4	
Q-1	Correct Answer :gateway
Q-2	Correct Answer :gateway
Q-3	Correct Answer :star
Q-4	Correct Answer :point-to-point
Q-5	Correct Answer :broadcast
Q-6	Correct Answer :manual
Q-7	Correct Answer :automatic
Q-8	Correct Answer :semiautomatic
Q-9	
Q-10	