

# Computer Networks Questions & Answers – Ethernet

This set of Computer Networks Multiple Choice Questions & Answers (MCQs) focuses on “Ethernet”.

1. Ethernet frame consists of \_\_\_\_\_

- a) MAC address
- b) IP address
- c) Default mask
- d) Network address

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Answer: a

Explanation: The Ethernet frame has a header that contains the source and destination MAC address. Each MAC address is of 48 bits.

2. What is start frame delimiter (SFD) in ethernet frame?

- a) 10101010
- b) 10101011
- c) 00000000
- d) 11111111

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Answer: b

Explanation: The start frame delimiter is a 1 byte field in the Ethernet frame that indicates that the preceding bits are the start of the frame. It is always set to 10101011.

3. MAC address is of \_\_\_\_\_

- a) 24 bits
- b) 36 bits
- c) 42 bits
- d) 48 bits

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Answer: d

Explanation: MAC address is like a local address for the NIC that is used to make a local Ethernet

(or wifi) network function. It is of 48 bits.

4. What is autonegotiation?

- a) a procedure by which two connected devices choose common transmission parameters
- b) a security algorithm
- c) a routing algorithm
- d) encryption algorithm

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Answer: a

Explanation: autonegotiation is a procedure by which two connected devices choose common transmission parameters. It is a signaling mechanism used in Ethernet over Twisted pair cables.

5. Ethernet in metropolitan area network (MAN) can be used as \_\_\_\_\_

- a) pure ethernet
- b) ethernet over SDH
- c) ethernet over MPLS
- d) all of the mentioned

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Answer: d

Explanation: A metropolitan area network (MAN) that is based on Ethernet standards is called an Ethernet MAN. It is commonly used to connect nodes to the Internet. Businesses also use Ethernet MANs to connect their own offices to each other.

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6. A point-to-point protocol over ethernet is a network protocol for \_\_\_\_\_

- a) encapsulating PPP frames inside ethernet frames
- b) encapsulating ethernet frames inside PPP frames
- c) for security of ethernet frames
- d) for security of PPP frames

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Answer: a

Explanation: PPOE or Point-to-Point protocol over Ethernet was first introduced in 1999. It is popularly used by modern day Internet Service Providers for Dial-up connectivity.

7. High speed ethernet works on \_\_\_\_\_

- a) coaxial cable
- b) twisted pair cable

- c) optical fiber
- d) unshielded twisted pair cable

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Answer: c

Explanation: Fast Ethernet is mostly used in networks along with Category 5 (Cat-5) copper twisted-pair cable, but it also works with fiber-optic cable. Based on the cable being used, There can be three types of Fast Ethernet.

8. The maximum size of payload field in ethernet frame is \_\_\_\_\_

- a) 1000 bytes
- b) 1200 bytes
- c) 1300 bytes
- d) 1500 bytes

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Answer: d

Explanation: The minimum size of the payload field is 40 bytes and the maximum size is 1500 bytes. If the payload size exceeds 1500 bytes, the frame is called a jumbo frame.

9. What is interframe gap?

- a) idle time between frames
- b) idle time between frame bits
- c) idle time between packets
- d) idle time between networks

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Answer: a

Explanation: The inter-frame gap is the idle time for the receiver between the incoming frame flow. The inter-frame gap must be as low as possible for idle connections.

10. An ethernet frame that is less than the IEEE 802.3 minimum length of 64 octets is called \_\_\_\_\_

- a) short frame
- b) runt frame
- c) mini frame
- d) man frame

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Answer: b

Explanation: An ethernet frame that is less than the IEEE 802.3 minimum length of 64 octets is called a runt frame. Such frames are a result of collisions or software malfunctions.