

OSI Model - Multiple Choice Questions and Network Interface Information

OSI Model Questions

1. According to the OSI model, at which of the following layers are Internet Protocol (IP) addresses assigned?
 - (a) Session
 - (b) Data link
 - (c) Presentation
 - (d) **Network** *(Correct Answer)*
2. Which of the following is the correct sequence of layers in the OSI Model (From lowest to highest)?
 - (a) Physical, Network, Data link, Session, Transport, Presentation, Application
 - (b) **Physical, Data link, Network, Transport, Session, Presentation, Application** *(Correct Answer)*
 - (c) Transport, Session, Data link, Application, Presentation, Network, Physical
 - (d) Physical, Data link, Network, Transport, Presentation, Session, Application
3. According to the OSI model, which layer performs parity checking and error detection?
 - (a) Session
 - (b) **Data Link** *(Correct Answer)*
 - (c) Presentation
 - (d) Physical
4. Which of the following layers of the OSI Model does Ethernet operate?
 - (a) Physical
 - (b) Data Link

- (c) Network
 - (d) Transport
 - (e) **Both Physical and Data link layer** (*Correct Answer*)
 - (f) Both Physical and Network Layers
5. According to the OSI Model, which layer is responsible for routing?
- (a) Session
 - (b) Data link
 - (c) Presentation
 - (d) **Network** (*Correct Answer*)
6. According to the OSI model, which layer handles LAN switching?
- (a) Session
 - (b) **Data Link** (*Correct Answer*)
 - (c) Presentation
 - (d) Network
7. At which layer of the OSI Model do network bridges and switches operate?
- (a) Network
 - (b) Physical
 - (c) Session
 - (d) **Data Link** (*Correct Answer*)
8. According to the OSI model, which layer is responsible for sending acknowledgments of successful data transfer?
- (a) Session
 - (b) **Transport** (*Correct Answer*)
 - (c) Data Link
 - (d) Presentation
9. According to the OSI model, which layer organizes data bits into small data units called frames?
- (a) Network
 - (b) **Data Link** (*Correct Answer*)
 - (c) Transport
 - (d) Physical
10. When compared to the OSI model, the functionality of which two sub-layers is incorporated in the application layer of the TCP/IP model?

- (a) **Session and Presentation** *(Correct Answer)*
 - (b) Transport and Session
 - (c) Session and Physical
 - (d) Presentation and Data link
11. Which layer is broken down into MAC and LLC sub-layers?
- (a) Network
 - (b) **Data Link** *(Correct Answer)*
 - (c) Session
 - (d) Physical
12. According to the OSI model, which layer provides services such as file transfer, database access, email, and remote login to hosts?
- (a) **Application** *(Correct Answer)*
 - (b) Presentation
 - (c) Session
 - (d) Data Link
13. At which layer of the OSI Model does a HUB operate?
- (a) Network
 - (b) **Physical** *(Correct Answer)*
 - (c) Session
 - (d) Data Link
14. Which layer of the OSI model corresponds to TCP?
- (a) Network
 - (b) **Transport** *(Correct Answer)*
 - (c) Session
 - (d) Data Link
15. Which OSI layer is responsible for data encryption and decryption?
- (a) Physical Layer
 - (b) Data Link Layer
 - (c) **Presentation Layer** *(Correct Answer)*
 - (d) Transport Layer

Network Interface Information

The following network interface details were obtained from the system configuration:

- **MAC (Physical) Address:** A0-51-0B-29-C9-4E
- **IPv4 Address of the Network Interface:** 10.1.201.72
- **IPv4 Address of the Default Gateway:** 10.1.200.1