Session Layer Questions

Question 1:

In OSI network architecture, the dialog control and token management are responsibility of _____.

1. Session layer

2. Network layer

3. Transport layer

4. Data link layer

5. Physical layer

Answer (Detailed Solution Below)

Option 1 : Session layer

Session Layer Question 1 Detailed Solution

The correct answer is **option 1.**

Concept:

In OSI network architecture, dialogue control and token management are responsibilities of the **Session layer**. In the seven-layer OSI model of computer networking, the session layer is layer 5. The session layer provides the mechanism for opening, closing, and managing a session between end-user application processes, i.e., a semi-permanent dialogue. Communication sessions consist of requests and responses that occur between applications. Session-layer services are commonly used in application environments that make use of remote procedure calls (RPCs).

An example of a session layer protocol is the OSI protocol suite session-layer protocol, also known as X.225 or ISO 8327. In case of a connection loss, this protocol may try to recover the connection.

Hence the correct answer is the *Session layer.*

📑 *Additional Information*
Layers of OSI Model:

OSI stands for Open Systems Interconnection. It has been developed by ISO —International Organization for Standardization, in the year 1984. It is a 7 layer architecture with each layer having specific functionality to perform. All these 7 layers work collaboratively to transmit the data from one person to another across the globe.

Physical Layer:

It is responsible for the actual physical connection between the devices.

Data Link Layer:

The data link layer is responsible for the node-to-node delivery of the message. The main function of this layer is to make sure data transfer is error-free from one node to another, over the physical layer.

Network Layer:

The network layer works for the transmission of data from one host to the other located in different networks. It also takes care of packet routing.

Transport Layer:

It is responsible for the End to End Delivery of the complete message.

Session Layer:

This layer is responsible for the establishment of connection, maintenance of sessions, authentication, and also ensures security.

Presentation Layer:

The data from the application layer is extracted here and manipulated as per the required format to transmit over the network.

Application layer :

It is an abstraction layer that specifies the shared communications protocols and interface methods used by hosts in a communications network.

Question 2:

Which layer is associated with log in and log out from the network?

1. Data Link

2. Presentation

3. Session

4. Transport

Answer (Detailed Solution Below)

Option 3 : Session

Session Layer Question 2 Detailed Solution

- The Session Layer provides the mechanism for opening, closing and managing a session

- between end-user application processes.
- Communication sessions consist of requests and responses that occur between applications.
- Session layer is associated with log in and log out from the network

Question 3:

View this Question Online >

Consider ISO-OSI network architecture reference model. Session layer of this model offer Dialog control, token management and _____ as services.

1. Synchronization

2. Asynchronization

3. Errors

4. Flow control

Answer (Detailed Solution Below)

Option 1 : Synchronization

Session Layer Question 3 Detailed Solution

In ISO-OSI architecture, there are seven layers in this model. Starting from physical layer (layer 1), then data link layer, network layer, transport layer, session layer, presentation layer, application layer (layer - 7) respectively.

In this layer our main focus is on work of session layer.

Session layer:

Session layer is the network dialog controller. It establishes, maintains and synchronizes the interaction among communicating system. It is responsible for dialog control, token management

and synchronization in the network.

- Dialog control: Session layer allows two systems to enter into a dialog. It allows the communication between two processes to take place in either half-duplex or full – duplex.
- Synchronization: It allows a process to add checkpoints to a stream of data.
- Token management: It prevents two parties from attempting the same critical operation at the same time

Question 4:

Which layer of OSI model provide the service of token management?

1. Session Layer

2. Physical layer

3. Transport Layer

4. Data link layer

Answer (Detailed Solution Below)

Option 1 : Session Layer

Session Layer Question 4 Detailed Solution

- Services provided by session layer is OSI model are as follows:

1. dialog control
2. token management
3. Synchronization

- **Token management**: For some protocols it is essential that both sides do not attempt the

- same operation at the same time
- The session layer provides tokens that can be exchanged
- Only the side holding the token may perform the critical action

Question 5:

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Match the following:

I	II
A. Physical Layer	P. Packets
B. Network Layer	Q. Error control
C. Transport Layer	R. Dialogue control
D. Session Layer	S. Bits

1. A – R, B – P, C – S, D – Q

2. A – S, B – P, C – R, D – Q

3. A – S, B – P, C – Q, D – R

4. A – R, B – P, C – Q, D – S

Answer (Detailed Solution Below)

Option 3 : A – S, B – P, C – Q, D – R

Session Layer Question 5 Detailed Solution

Transport layer provides Service Point Addressing, Segmentation and Reassembling, Connection Control, flow control and error control.

Session layer provides dialogue control, token management, synchronization.

A PDU is composed of protocol specific control information and user data. In the layered architectures of communication protocol stacks, each layer implements protocols tailored to the specific type or mode of data exchange.

A PDU for physical layer is bits and PDU for network layer is packets.

Top Session Layer MCQ Objective Questions

Question 6

Which layer is associated with log in and log out from the network?

1. Data Link

2. Presentation

3. Session

4. Transport

Answer (Detailed Solution Below)

Option 3 : Session

Session Layer Question 6 Detailed Solution

- The Session Layer provides the mechanism for opening, closing and managing a session between end-user application processes.
- Communication sessions consist of requests and responses that occur between applications.
- Session layer is associated with log in and log out from the network

Question 7:

Which layer of OSI model provide the service of token management?

1. Session Layer

2. Physical layer

3. Transport Layer

4. Data link layer

Answer (Detailed Solution Below)

Option 1 : Session Layer

Session Layer Question 7 Detailed Solution

- Services provided by session layer is OSI model are as follows:

1. dialog control
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3. Synchronization

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- The session layer provides tokens that can be exchanged
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Question 8:

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Which layer is associated with log in and log out from the network?

1. Data Link

2. Presentation

3. Session

4. Transport

Answer (Detailed Solution Below)

Option 3 : Session

Session Layer Question 8 Detailed Solution

- The Session Layer provides the mechanism for opening, closing and managing a session between end-user application processes.
- Communication sessions consist of requests and responses that occur between applications.
- Session layer is associated with log in and log out from the network

Question 9:

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Match the following:

I	II
A. Physical Layer	P. Packets
B. Network Layer	Q. Error control
C. Transport Layer	R. Dialogue control
D. Session Layer	S. Bits

1. A – R, B – P, C – S, D – Q

2. A – S, B – P, C – R, D – Q

3. A – S, B – P, C – Q, D – R

4. A – R, B – P, C – Q, D – S

Answer (Detailed Solution Below)

Option 3 : A – S, B – P, C – Q, D – R

Session Layer Question 9 Detailed Solution

Transport layer provides Service Point Addressing, Segmentation and Reassembling, Connection Control, flow control and error control.

Session layer provides dialogue control, token management, synchronization.

A PDU is composed of protocol specific control information and user data. In the layered architectures of communication protocol stacks, each layer implements protocols tailored to the

specific type or mode of data exchange.

A PDU for physical layer is bits and PDU for network layer is packets.

Question 10:

In OSI network architecture, the dialog control and token management are responsibility of _____.

1. Session layer

2. Network layer

3. Transport layer

4. Data link layer

5. Physical layer

Answer (Detailed Solution Below)

Option 1 : Session layer

Session Layer Question 10 Detailed Solution

The correct answer is **option 1.**

Concept:

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📝 *Additional Information*

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Presentation Layer:

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Application layer :

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Question 11:

Consider ISO-OSI network architecture reference model. Session layer of this model offer Dialog control, token management and _____ as services.

1. Synchronization

2. Asynchronization

3. Errors

4. Flow control

Answer (Detailed Solution Below)

Option 1 : Synchronization

Session Layer Question 11 Detailed Solution

In ISO-OSI architecture, there are seven layers in this model. Starting from physical layer (layer 1), then data link layer, network layer, transport layer, session layer, presentation layer, application layer (layer - 7) respectively.

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- Synchronization: It allows a process to add checkpoints to a stream of data.
- Token management: It prevents two parties from attempting the same critical operation at the same time

Question 12:

Which of the following statements is false?

1. The session, presentation and application layers are the user support layers.

2. The presentation layer ensures interoperability between communicating devices through the transformation of data into a mutually agreed upon format.

3. The transport layer links the network support layers and the user support layers.

4. The transport layer establishes, maintains and synchronizes the interactions between communicating devices.

Answer (Detailed Solution Below)

Option 4 : The transport layer establishes, maintains and synchronizes the interactions between communicating devices.

Session Layer Question 12 Detailed Solution

Option 4 is false.

It can be corrected as: The session layer establishes, maintains and synchronizes the interactions between communicating devices.