

NPTEL  
Ethical Hacking  
Assignment Week 1

In which of the following penetration testing models, no information about the network is given to the tester?

- a. White box model.
- b. Black box model.
- c. Gray box model.
- d. Red box model.

Which of the following statement(s) is/are **true** for a circuit switched network?

- a. A communication link may be shared by more than connection.
- b. A communication link is dedicated to a connection and cannot be shared with other connections.
- c. The packet transfer delay between a pair of nodes may depend on the prevailing network traffic.
- d. It is more efficient for bursty traffic.

Which of the following statement(s) is/are **false** for virtual circuit based packet transfer approach?

- a. It is a connection-oriented approach, where a route is established priori to transfer of packets.
- b. The intermediate node can perform dynamic routing.
- c. All the packets reach in order to the destination.
- d. It is a true packet switched network.

A packet of size 2000 bytes is sent over a 50 kilo-bits-per-second (Kbps) point-to-point link whose propagation delay is 5 msec. The packet will reach the destination after \_\_\_\_\_ msec.  
(Assume 1K = 1000)

Which of the following OSI layers is responsible for end-to-end reliable data transfer?

- a. Physical layer
- b. Transport layer
- c. Network layer
- d. Datalink layer

Which of the following statement(s) is/are **true** for the IP address?

- a. It uniquely identifies a network interface of a computer system.
- b. It uniquely identifies a host in the network.
- c. It indicates how many hardware ports are there in the computer system.
- d. None of these.

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How many bits are used for IP address (in IPv4) and port number respectively?

- a. 32, 8
- b. 32, 16
- c. 128, 8
- d. 128, 16

Which of the following is **not** a valid port numbers in TCP/IP?

- a. 21
- b. 80
- c. 443
- d. 8080
- e. 80800

If the IP header is 224 bits long, what will be the value of the "HLEN" field (in decimal) \_\_\_\_\_?

The minimum size of IP header required in an IP datagram is \_\_\_\_\_ bytes.