

Quizz

Networking Introduction 2020

September 29, 2020

Overview - Open questions

1. What's the internet?

Your understanding of the Internet

- a) what's an application? where do applications run?
- b) describe the internet with your own words

2. Network Edge

Network edge

- a) What is an access network?
- b) Mention some access technologies you know
- c) Which equipment can we typically find at the edge of the network?

3. Network Edge 2

When a resident uses a DSL service to connect to the Internet, what is the role of the telephone company?

4. Network Core

Consider a packet-switched network

- a) What equipments can we typically find at the core network?
- d) What are the main functions of routers?
- e) What is a packet header?

5. Protocols

- a) What is a protocol?
- b) Why are protocols important?
- c) Name some computers protocols you know

6. Layers

- a) Why the internet has adopted a layered model?
- b) What does the term encapsulation refer to?

7. Efficiency

Assume a system uses five protocol layers. If the application program creates a message of 100 bytes and each layer (including the fifth and the first) adds a header of 10 bytes to the data unit, what is the efficiency (the ratio of application layer bytes to the number of bytes transmitted) of the system?

8. Packetizing

Consider a packet-switched network like the Internet. Using the TCP/IP protocol suite, we need to transfer a huge file. Mention an advantage and a disadvantage of sending large packets.

The TCP/IP Model - Multiple Choice Questions

1. Vocabulary

The transport-layer packet in the TCP/IP protocol suite is called :

- (a) a message
- (b) a datagram
- (c) a segment or a user datagram
- (d) a frame

2. Layers 1

In the TCP/IP protocol suite, the layer responsible for moving frames from one hop (node) to the next is:

- (a) physical
- (b) data-link
- (c) transport
- (d) network

3. Layers 2

In the TCP/IP protocol suite, the physical layer is concerned with the movement of _____over the physical medium.

- (a) programs

- (b) dialogs
- (c) protocols
- (d) bits

4. Layers 3

The _____layer is responsible for the delivery of a message from one process to another.

- (a) physical
- (b) transport
- (c) network
- (d) application

5. Ports

In the TCP/IP protocol suite, a port number is the identifier at the _____.

- (a) application layer
- (b) transport layer
- (c) network layer
- (d) physical layer

6. IP reliability

The Internet Protocol (IP) is _____protocol.

- (a) a reliable
- (b) a connection-oriented
- (c) a reliable and connection-oriented
- (d) an unreliable

7. Encapsulation 1

In TCP/IP, a message at the application layer is encapsulated in a packet at the _____layer.

- (a) network
- (b) transport
- (c) data-link
- (d) physical

8. Encapsulation 2

In TCP/IP, a message at the transport layer is encapsulated in a packet at the _____layer.

- (a) network
- (b) transport
- (c) data-link
- (d) physical

9. Encapsulation 3

In TCP/IP, a message belonging to the network layer is decapsulated from a packet at the _____layer.

- (a) network
- (b) transport
- (c) data-link
- (d) physical

10. Encapsulation 4

In TCP/IP, a message belonging to the transport layer is decapsulated from a packet at the _____layer.

- (a) network
- (b) transport
- (c) data-link
- (d) physical