

Quiz 5 [CS5700 Fall 2019]

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Score: _____

[Q1] Service model of network layer (IP).

- [5 pts] Does network layer provide reliable data transfer?

No.

- [5 pts] Does network layer provide guarantee on packet delay?

Yes.

- [5 pts] Does network layer provide guarantee on over all throughput?

No.

[Q2] Answer the following questions about IP protocol.

- [10 pts] What's the length of IPv4 address? What's the length of IPv6 address?

IPv4 is 32 bits (4 bytes) long, while IPv6 is 128 bits (16 bytes) long.

- [20 pts] IPv4 supports fragmentation. In your own words, what is it?

When the data is longer, IPv4 could split the data into several packets before sending it and reassemble these packets after receiving them all.

- [10 pts] What's the purpose of the TTL field in the IP header?

TTL is a field that tells the routers in the network how long an IP data could live, if the data lives too long, then it should be discarded.

[Q3] Answer the following questions about routing protocol.

- [15 pts] What is intra-domain (aka intra-AS) routing?

It is the routing among the routers in the same AS.

- [10 pts] Give at least 2 examples of intra-domain routing protocols.

RIP

- [15 pts] What is inter-domain (aka inter-AS) routing?

It is the routing between different AS.

- [5 pts] What's the protocol we use for inter-domain routing?

BGP