

CIS 480 Computer Networks Quiz

Name:

1. What are the two key functions of the network layer?
2. IP addresses are split into net_id and host_id. Why is this done?
3. A forwarding table for a router in a network using CIDR is given below.

Address prefix	Port
121.58.28.0/22	0
121.58.28.0/23	1
121.58.28.0/24	2

- (a) If the router receives a packet with destination 121.58.29.16, what will the port be?
- (b) If the router receives a packet with destination 121.58.31.16, what will the port be?

4. IPv4 contained a checksum while IPv6 does not. Please explain why the designers of IPv6 decided the checksum was not needed.
5. What is HOL blocking? Does it occur in input ports or output ports?
6. Do routers have IP addresses? If so how many?
7. What field in the IP header can be used to ensure that a packet is forwarded no more than N routers?
8. When a large datagram is fragmented into multiple smaller datagrams, where are these smaller datagrams reassembled into a single larger datagram?