Ceng 435 - Wireshark Assignment 3

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Answer 1
Traceroute sent 15 ICMP echo requests. TTL fields of these packets start from 1 and are increased by 1 for each router on the path, i.e., first one's TTL field is 1, second's is 2, and so on.

Answer 2

Number	IP Address
9	192.168.1.1
13	192.168.5.1
17	212.156.201.18
19	81.212.78.245
21	81.212.29.206
23	81.212.199.43
29	212.156.101.134
31	213.198.83.221
44	129.250.4.78
48	129.250.6.6
52	129.250.3.12
56	129.250.4.190
60	83.231.199.242

They are exactly the same as the output. In the output, there is an asterisk which indicates the timeout and the last echo request reaches to the destination. That is why there are 15 requests but 13 TTL exceeded responses.

Answer 3
Traceroute iteratively deepens the path by starting the TTL field from 1 and incrementing it by 1 so that it receives TTL exceeded responses from each router on the path. This route is not always the same, it may change. Routers forward packets to the next router by consulting their tables and these tables may change for congestion and traffic control purposes.

Answer 4
Packet #121's IP header length is 20 bytes and its total packet length is 88 bytes.

Answer 5
ICMP = 1. UDP = 17.

Answer 6
Yes, it is fragmented. There are 4 fragments. The reason is that the data size is too large for a single packet; thus, it is fragmented. Specifically, MTU (Maximum Transfer Unit) is 1500 bytes, and 20 bytes of it is the header. Hence, the data is divided into four 1480 byte fragments.