Question 1

11111111 11111111 10000000 00000000

$17 network -> 32 - 17 = 15 bits for host --> 2^15 total host IDs, but 2 are reserved for the network and broad$ $2 = 32766 IP addresses$

Question 2

131.10.255.255/16 –¿ all host ID bits are set, broadcast address 131.10.255.256/23 –¿ can't represent 256 in 8 bits 29.23.45.16/33 –¿ can't have 33 network bits in 32 bits 127.1.1.1/8 –¿ starting with 127 is a loopback address 131.1.1.1.1/24 –¿ more than 32 bits 131.10.255.254/17 –¿ okay? 131.0.0.77/32 –¿ no host ID part

Question 3

device A and D have same IP

Question 4

straightforward.

Question 5

a) netmask: 255.255.255.11100000 network ID: 192.168.0.0 host ID: 14?? min IP: 192.168.0.11100001 (ending in 0 is network address) max IP: 192.168.0.11111110 (ending in 1 is broadcast address) number of hosts: 2tothe5 minus $2 = 30$ hosts

etc for rest.

Question 6

```
PING google.com (74.125.24.102) 56(84) bytes of data.

--- google.com ping statistics ---
5 packets transmitted, 0 received, 100% packet loss, time 3999ms
```