Q1:
200.15.9.64/28

Q2:
This is a class B address. Three bits are used to separate subnets and 13 bits are used to separate hosts. So it provides 2^3 = 8 subnets and 2^13 – 2 = 8190 hosts.

Q3:
a. network address: 40.45.74.0/21
   broadcast address: 40.45.81.255
   subnet mask: 255.255.248.0
b. network address: 172.8.30.0/23
   broadcast address: 172.8.31.255
   subnet mask: 255.255.254.0

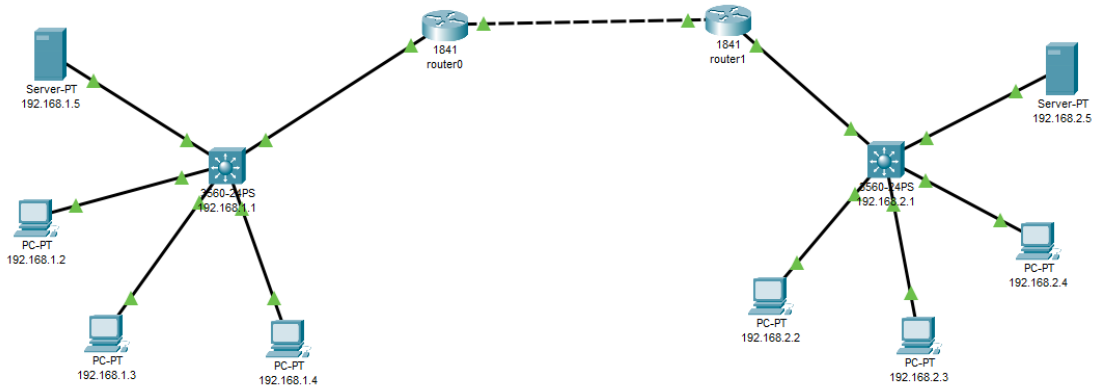
Q4:
223.1.67.0/24
Subnet1: network address: 223.1.67.0
        Broadcast address: 223.1.67.127
        Subnet mask: 255.255.255.128
Subnet2: network address: 223.1.67.128
        Broadcast address: 223.1.67.191
        Subnet mask: 255.255.255.192
Subnet1: network address: 223.1.67.192
        Broadcast address: 223.1.67.207
        Subnet mask: 255.255.255.240

Q5:
a) IP address conflict
b) When he pings Jim's computer, a packet loss will occur
c) Ask DHCP server for another IP address

Q6:
a. If the queuing buffer in the router is full when a packet arrives, the packet will be dropped.
b. If an internet link is full loaded when a packet arrives, the packet will be dropped.
c. The setting of the firewalls in a router can also cause the dropping of the packets.
d. The physical bugs of a router can cause the packet drop.

Q7:
A private network address is an address that only have meaning to devices in that network. The private network address is not visible to the outside network. The NAT-enabled router behaves to the outside network as a single device with a single IP address, and the private network address is given by the ISP's DHCP server.

Q8:



The IP configuration is shown in the figure. The IP address of the interface of router0 between router0 and the left switch is set to 192.168.1.1. The IP address of the interface of router0 between router0 and router1 is set to 192.168.3.1. Network address 192.168.1.0 and 192.168.3.0 are added to the RIP of router0. The IP address of the interface of router1 between router1 and the right switch is set to 192.168.2.1. The IP address of the interface of router1 between router0 and router1 is set to 192.168.3.2. Network address 192.168.2.0 and 192.168.3.0 are added to the RIP of router1.

I. LAN LAN MAN

II. C

III. D

IV. C