SOLUTIONS TO ASSIGNMENT UNIT 5

Ans 1: The packets arriving will be forwarded as mentioned below:

1. 135.46.63.10   – Interface 1.
2. 135.46.57.14   – Interface 0.
3. 135.46.52.2   – Router 2.
4. 192.53.40.7   – Router 1.
5. 192.53.56.7   – Router 2.

Ans 2:

First address	Last address	Subnet mask	Number of addresses
198.16.0.0	198.16.15.255	198.16.0.0/20	4096
198.16.16.0	198.16.23.255	198.16.16.0/21	2048
198.16.32.0	198.16.47.255	198.16.32.0/20	4096
198.16.64.0	198.16.95.255	198.16.64.0/19	8192

Ans 3:

Destination	Cost	Next hop
A	2	R1
B	2	R1
C	5	R1
D	5	R3

For destination A: no change, same next hop.

For destination B, R's total distance using R1 would be 1+1 = 2, cheaper than previous cost using R2, so change to R1 route.

For destination C, R1 is reporting an increase in cost. R's next_hop to C is R1, and so R must increase its cost to C to 4+1 = 5.

For destination D, R's total cost using R1 is 4+1 = 5, same cost as using R3, so no change.