
CHAPTER 6

Delivery and Routing of IP Packets

6.1 MULTIPLE-CHOICE QUESTIONS

1. c 3. b 5. d 7. c 9. b
11. b 13. c 15. d

6.2 EXERCISES

17. Direct
19. Indirect
21. No next hop (at home); interface m0
23. 111.20.18.14; interface m0
25. No next hop (at home); interface m2
27. 111.30.31.18; interface m0
29. 111.30.31.18; interface m0
31. See Table 6.1. The interface to the network 111.0.0.0 is m0; the interface to the network 192.16.7.0 is m1.

Table 6.1 *Exercise 31*

<i>Mask</i>	<i>Destination</i>	<i>Next Hop</i>	<i>F.</i>	<i>R.C.</i>	<i>U.</i>	<i>I.</i>
255.0.0.0	111.0.0.0		U	0	0	
255.255.255.0	192.16.7.0		U	0	0	
255.255.255.255	194.17.21.16	192.16.7.52	UGH	0	0	
255.255.255.0	193.14.5.0	111.25.19.20	UG	0	0	
255.255.255.0	194.17.21.0	192.16.7.52	UG	0	0	
0.0.0.0	0.0.0.0	111.30.31.18	UG	0	0	

33. See Table 6.2. The interface to the network 192.16.7.0 is m0; the interface to the network 194.17.21.0 is m1.

Table 6.2 Exercise 33

<i>Mask</i>	<i>Destination</i>	<i>Next Hop</i>	<i>F.</i>	<i>R.C.</i>	<i>U.</i>	<i>I.</i>
255.255.255.0	192.16.7.0		U	0	0	
255.255.255.0	194.17.21.0		U	0	0	
255.0.0.0	111.0.0.0	192.16.7.5	UG	0	0	
255.255.255.0	193.14.5.0	192.16.7.5	UG	0	0	
0.0.0.0	0.0.0.0	192.16.7.5	UG	0	0	

35. See Table 6.3.

Table 6.3 Exercise 35

<i>Mask</i>	<i>Destination</i>	<i>Next Hop</i>	<i>F.</i>	<i>R.C.</i>	<i>U.</i>	<i>I.</i>
255.255.255.0	220.3.6.0	---	U	0	0	
255.255.0.0	129.8.0.0	---	U	0	0	
255.255.0.0	134.18.0.0	222.13.16.41	UG	0	0	
0.0.0.0	0.0.0.0	222.13.16.41	UG	0	0	

37. See Table 6.4.

Table 6.4 Exercise 37

<i>Mask</i>	<i>Destination</i>	<i>Next Hop</i>	<i>F.</i>	<i>R.C.</i>	<i>U.</i>	<i>I.</i>
255.255.255.0	200.8.4.0	---	U	0	0	
255.255.255.0	80.4.6.0	210.7.2.9	UG	0	0	
255.255.255.0	80.4.5.0	210.7.2.9	UG	0	0	
0.0.0.0	0.0.0.0	200.8.4.17	UG	0	0	

39. See Table 6.5.

Table 6.5 Exercise 39

<i>Mask</i>	<i>Destination</i>	<i>Next Hop</i>	<i>F.</i>	<i>R.C.</i>	<i>U.</i>	<i>I.</i>
255.255.255.0	80.4.6.0	---	U	0	0	
255.255.255.0	80.4.5.0	---	U	0	0	
255.255.255.0	200.8.4.0	80.4.6.1	UG	0	0	
0.0.0.0	0.0.0.0	80.4.6.1	UG	0	0	

41. See Table 6.6.

Table 6.6 Exercise 41

<i>Destination</i>	<i>Next Hop</i>	<i>F.</i>	<i>R.C.</i>	<i>U.</i>	<i>I.</i>
111.0.0.0/8	-	U	0	0	m0
193.14.5.160/27	-	U	0	0	m2
193.14.5.192/27	-	U	0	0	m1
194.17.21.16/32	111.20.18.14	UGH	0	0	m0
192.16.7.0/24	111.15.17.32	UG	0	0	m0
194.17.21.0/24	111.20.18.14	UG	0	0	m0
0.0.0.0/0	111.30.31.18	UG	0	0	m0

43. See Table 6.7.

Table 6.7 Exercise 43

<i>Destination</i>	<i>Next Hop</i>	<i>F.</i>	<i>R.C.</i>	<i>U.</i>	<i>I.</i>
200.8.4.0/24	----	U	0	0	m2
80.4.5.0/24	210.4.10.3 or 200.8.4.12	UG	0	0	m1 or m2
80.4.6.0/24	210.4.10.3 or 200.8.4.12	UG	0	0	m1 or m2
0.0.0.0/0	????????????	UG	0	0	m0

45.

- a. 5
- b. 25
- c. 200
- d. 1000
- e. 0

