

Grade Book Detail

Exercise 5 (Chap 5)

Started: November 16, 2019, 8:47 pm  
Last change: November 17, 2019, 11:06 pm

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Q.Convert the IP address whose hexadecimal representation is C22F1582 to dotted decimal notation.  
194.47.21.130  
[Show Answer](#)

Question 1: 8 out of 8 in 1 attempt(s)

Q.A router has the following (CIDR) entries in its routing table:

Address/mask	Next hop
135.46.56.0/22	211.90.0.1
135.46.60.0/22	159.48.0.1
192.53.40.0/23	192.188.0.1
default	220.20.0.1

For each of the following IP addresses, what does the router do if a packet with that address arrives?

A. Write correct IP address of next hop:

No.	IP	Next hop
(a)	135.46.63.10	159.48.0.1
(b)	135.46.57.14	211.90.0.1
(c)	135.46.52.2	220.20.0.1
(d)	192.53.40.7	192.188.0.1
(e)	192.53.56.7	220.20.0.1

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Question 2: 10 (parts: 2, 2, 2, 2, 2) out of 10 in 1 attempt(s)

Q. A network on the Internet has a subnet mask of 255.255.240.0. What is the maximum number of address can be used for a single host?  
A. 4094  
[Show Answer](#)

Question 3: 5 out of 5 in 1 attempt(s)

Q. Suppose that host A is connected to a router R1, R1 is connected to another router, R2, and R2 is connected to host B. Suppose that a TCP message that contains 900 bytes of data and 20 bytes of TCP header is passed to the IP code at host A for delivery to B. Show the Total length, MF, and Fragment offset fields of the IP header in each packet transmitted over the three links. Assume that link A-R1 can support a maximum frame size of 1024 bytes including a 14-byte frame header, link R1-R2 can support a maximum frame size of 512 bytes, including an 8-byte frame header, and link R2-B can support a maximum frame size of 512 bytes including a 12-byte frame header.

A.Fill your answer in the blank

link	Packet#	Total length	MF	Fragment offset
A->R1	1	940	0	0
R1->R2	1	500	0	0
	2	460	0	60
R2->B	1	500	0	0
	2	460	0	60

Show Answer	940
Show Answer	0
Show Answer	0
Show Answer	500
Show Answer	1
Show Answer	0
Show Answer	460
Show Answer	0
Show Answer	60
Show Answer	500
Show Answer	1
Show Answer	0
Show Answer	460
Show Answer	0
Show Answer	60

Question 4: 13 (parts: 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 0, 1, 1, 1) out of 12 in 1 attempt(s)

**Q.** A large number of consecutive IP address are available starting at 198.16.0.0. Suppose that four organizations, A, B, C, and D, request 4000, 2000, 4000, and 8000 addresses, respectively, and in that order. For each of these, give the first IP address assigned, the last IP address assigned, and the mask in w.x.y.z/s notation.

**A.** Fill your answer in the blank

Org#	First IP	Last IP	net/mask
A	198.16.0.0	198.16.15.255	198.16.0.0/20
B	198.16.16.0	198.23.15.255	198.16.16.0/21
C	198.16.32.0	198.16.47.255	198.16.32.0/20
D	198.16.64.0	198.16.95.255	198.16.64.0/19

Show Answer	198.16.0.0
Show Answer	198.16.15.255
Show Answer	198.16.0.0/20
Show Answer	198.16.16.0
Show Answer	198.16.23.255
Show Answer	198.16.16.0/21
Show Answer	198.16.32.0
Show Answer	198.16.47.255
Show Answer	198.16.32.0/20
Show Answer	198.16.64.0
Show Answer	198.16.95.255
Show Answer	198.16.64.0/19

Question 5: 11 (parts: 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1) out of 10 in 1 attempt(s)

How many bits does the address of IPv6 have?

- ☐ 32
- ☐ 64
- ☒ 128
- ☐ 256

Show Answer 128

Question 6: 10 out of 10 in 1 attempt(s)

Without using IPv6, which can solve the problem of running out of IP addresses?

- ☐ class full addressing
- ☒ subnetting
- ☐ class addressing
- ☐ NAT

Show Answer NAT

Question 7: 0 out of 5 in 1 attempt(s)

What is the valid host range for subnet 172.16.10.16, mask 255.255.255.240?

- ☐ 172.16.10.20 through 172.16.10.22
- ☐ 172.16.10.16 through 172.16.10.23
- ☒ 172.16.10.17 through 172.16.10.31
- ☐ 172.16.10.17 through 172.16.10.30

Show Answer 172.16.10.17 through 172.16.10.30

Question 8: 0 out of 5 in 1 attempt(s)

The checksum in the IP packet covers \_\_\_\_\_.

- ☒ just the header
- ☐ just the data
- ☐ the header and the data
- ☐ just the source and destination addresses

Show Answer just the header

Question 9: 5 out of 5 in 1 attempt(s)

A router has two IP interfaces, one IP address is 192.168.11.25/24, and the other IP address is \_\_\_\_\_ (assume use same subnet mask).

- ☐ 192.168.13.0
- ☒ 192.168.11.26
- ☐ 192.168.13.255
- ☐ 192.168.13.26

Show Answer 192.168.13.26

Question 10: 0 out of 5 in 1 attempt(s)

Suppose two hosts A and B have IP address 10.10.1.10 and 10.10.2.10 respectively. If they are in a same subnet, what is the subnet mask?

- ☐ 255.0.0.0
- ☒ 255.255.0.0
- ☐ 255.255.255.0
- ☐ 255.255.255.255

Show Answer 255.255.0.0

Question 11: 5 out of 5 in 1 attempt(s)

Which IP address is a loopback address?

- ☐ 1.0.0.1
- ☐ 192.168.0.1
- ☒ 127.0.0.1
- ☐ 172.0.0.1

Show Answer 127.0.0.1

Question 12: 5 out of 5 in 1 attempt(s)

Which is not the private address that will not appear in Internet datagram?

- ☐ 10.3.18.82
- ☐ 192.168.8.3
- ☐ 10.214.0.1
- ☒ 172.33.8.8

Show Answer 172.33.8.8

Question 13: 5 out of 5 in 1 attempt(s)

Which protocol is used in command "ping 10.214.8.9" ?

- ☐ ARP
- ☒ ICMP
- ☐ RARP
- ☐ ECHO

Show Answer ICMP

Question 14: 5 out of 5 in 1 attempt(s)

Which is not a legal IPV6 address?

- ☐ 8300::1382:4567:89AB:CDEF
- ☒ 1382:4567:89AB:CDEF
- ☐ ::211.31.20.46
- ☐ 2A43:0000:0000:0000:0123:4567:89AB:CDEF

Show Answer 1382:4567:89AB:CDEF

Question 15: 5 out of 5 in 1 attempt(s)

Total: 87/100

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