1.1	**D**	1.2	**C**	1.3	**E**	1.4	**C**	1.5	**C**
1.6	**C**	1.7	**D**	1.8	**D**	1.9	**E**		

2.

(a)	(b)
0.15 s	**2.4 * 10^8 b**

3.

(a)	(b)	(c)
Yes	**300 Kbps**	**2 * d * r**

(d)
$(1-p) + p * (1-p) + p^2 * (1-p) + \ldots + p^{k-1} * (1-p)$ **$= 1 - p^k$**

4.

(a)	(b)
137.132.85.2	**192.33.4.12**
(c)	(d)
192.31.80.30	**54.191.241.8**
(e)	(f)
duke.edu	**53**

5.

Interface	IP Range	No. of IP
3	**1100 0000 – 1100 1111** **1110 0000 – 1111 1111**	**32+16=48**
4	**1010 0000 – 1011 1111**	**32**
1	**1000 0000 – 1001 1111**	**32**
2	**1101 0000 – 1101 1111**	**16**

0	0000 0000 – 0111 1111	128

6.

(a)	(b)
49	210, 210, 220, 220, 250

(c)
3

7.

(a)	(b)
45	10 (symmetric key cryptography)

(c)
Open-ended question. Any reasonable answer will be accepted but state your assumptions clearly.

Please DO NOT upload questions and answers onto the Internet.