P12:
For interface 0: the destination host addresses range is from 11000000 to 11011111, and 32 addresses.
For interface 1: the destination host addresses range is from 10000000 to 10111111, and 64 addresses.
For interface 2: the destination host addresses range is from 11100000 to 11111111, and 32 addresses.
For interface 3: the destination host addresses range is from 00000000 to 01111111, and 128 addresses.

P13:
The subnet 1: 223.1.17.0/25
The subnet 2: 223.1.17.128/25
The subnet 3: 223.1.17.16/28

P19:
There will be 4 fragments. Because (2400-20)/(700-20)=4
Then the identification number as the problems said will be number 422.
The first three fragments will be 680 bytes,while the last one will be (2400-20)-3*680=340.
The first three fragments' flag will be 1, while the last one will be 0.
The offset will be 0, 85,170,255

P27.(a).(c).(f)
(a):

Step	N	D(V),P(V)	D(U),P(U)	D(W),P(W)	D(X),P(X)	D(Y),P(Y)	D(Z),P(Z)
0	t	4,t	2,t	∞	∞	7,t	∞
1	tu	4,t		5,u	∞	7,t	∞
2	tuv			5,u	7,v	7,t	∞
3	tuvw				7,v	7,t	∞
4	tuvwx					7,t	15,x
5	tuvwxy					7,t	15,x
6	tuvwxyz						

Step	N	d(x),p(x)	d(w),p(w)	d(t),p(t)	d(w),p(w)	d(y),p(y)	d(z),p(z)
0	v	3,v	3,v	4,v	4,v	8,v	∞
1	vx		3,v	4,v	4,v	8,v	11,x
2	vxu			4,v	4,v	8,v	11,x
3	vxut				4,v	8,v	11,x
4	vxytw					8,v	11,x
5	vxutwy					8,v	11,x
6	vxutwyz						11,x

step	N	d(x),p(x)	d(y),p(y)	d(v),p(v)	d(w),p(w)	d(u),p(u)	d(t),p(t)
0	z	8,z	12,z	∞	∞	∞	∞
1	zx		12,z	11,x	14,x	∞	∞
2	zxv		12,z		14,x	14,v	15,v
3	zxvy				14,x	14,v	15,v
4	zxvyu				14,x		15,v
5	zxvyuw				14,x		15,v
6	zxvyuwt						15,v

p.28:

	u	v	x	y	z
z	∞	6	2	∞	0
x	∞	∞	∞	∞	∞
v	∞	∞	∞	∞	∞

	u	v	x	y	z
z	7	5	2	5	0
x	∞	3	0	3	2
v	1	0	3	∞	6

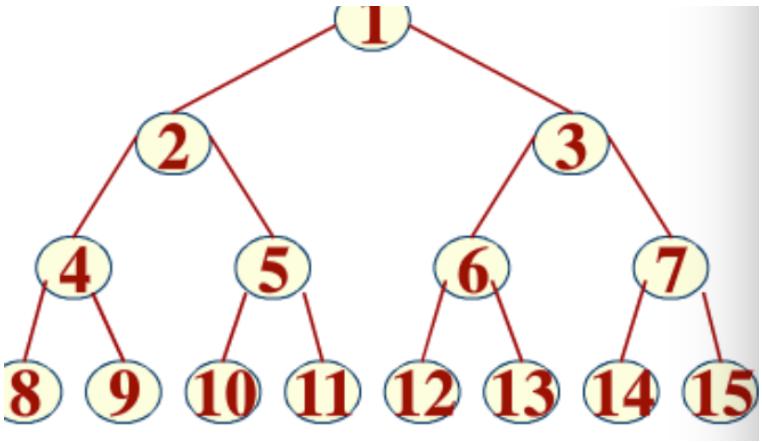
	u	v	x	y	z
z	6	5	2	5	0
x	4	3	0	3	2
v	1	0	3	3	5

	u	v	x	y	z
z	6	5	2	5	0
x	4	3	0	3	2
v	1	0	3	3	5

P30:
1.(2,5,7)
2.
if (x,w) changes, if the change is not bigger than 4.which means the new (x,w)<=6, then the least path from x to u will stay same and the cost will change to 5+a, a means the change of c(x,w). if the change is more than 6. Then the path will changes form x-w-u to x-y-u and the least cost will be 11. Then the x will inform the changes to its neighbors.
if c(x,y) changes, if the new c(x,y)<1, then the path changes and the least cost because a+6, a is the new c(x,y).
3. if c(x,y)becomes bigger , then the path will not change. if the c(x,y)becomes smaller,and the new c(x,y)>=1. then x will not inform the neighbors.

P37:
a. eBGP
b. iBGP
c. EBGP
d. IBGP

P45:



The above is a tree that has 1+2+4+8 notes, suppose that we have another tree which is very like this one but has 1+2+4+8+16 notes.,whose height is 5. So there will be 2+4+8+16+32 =62 link crossings. and because there are 5 hops. So there are 5*32=160 crossings.
A topology that all receivers are in a line.

p49:
The F,B,A will connect C directly. Then G-D-E-C,D-E-C. Is is not a minimum cost tree.