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Some of the answers were arrived at while working in group with:  
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### Problem 6.1

A. Routing tables of each nodes after Route Reply arrived at Node A :

Node A			
Req-ID : 3		Loc. Seq. # : 6	
Dest.	Link	Hops	Seq.#
B	B	1	8
C	C	1	3
D	C	3	12

Node B			
Req-ID : 5		Loc. Seq. # : 8	
Dest.	Link	Hops	Seq.#
A	A	1	6
C	C	1	3
D	C	3	12

Node C			
Req-ID : 1		Loc. Seq. # : 3	
Dest.	Link	Hops	Seq.#
A	A	1	6
B	B	1	8
E	E	1	4
D	E	2	12

Node D			
Req-ID : 6		Loc. Seq. # : 12	
Dest.	Link	Hops	Seq.#
E	E	1	4
F	F	1	7

Node E			
Req-ID : 2		Loc. Seq. # : 5	
Dest.	Link	Hops	Seq.#
C	C	1	3
D	D	1	12
F	F	1	7

Node F			
Req-ID : 3		Loc. Seq. # : 7	
Dest.	Link	Hops	Seq.#
D	D	1	12
E	E	1	4

B. Routing tables of each nodes after Route Reply arrived at Node B : (this is after A)

Node A			
Req-ID : 3		Loc. Seq. # : 6	
Dest.	Link	Hops	Seq.#
B	B	1	9
C	C	1	3
D	C	3	12

Node B			
Req-ID : 6		Loc. Seq. # : 9	
Dest.	Link	Hops	Seq.#
A	A	1	6
C	C	1	3
D	C	3	12

Node C			
Req-ID : 1		Loc. Seq. # : 3	
Dest.	Link	Hops	Seq.#
A	A	1	6
B	B	1	9
E	E	1	4
D	E	2	12

Node D			
Req-ID : 6		Loc. Seq. # : 12	
Dest.	Link	Hops	Seq.#
E	E	1	4
F	F	1	7

Node E			
Req-ID : 2		Loc. Seq. # : 6	
Dest.	Link	Hops	Seq.#
C	C	1	3
D	D	1	12
F	F	1	7

Node F			
Req-ID : 3		Loc. Seq. # : 7	
Dest.	Link	Hops	Seq.#
D	D	1	12
E	E	1	4

## Problem 6.2

### Problem 6.3

#### A. Barter Trade :

- Disadvantages
  - i. Only immediate & bilateral trading
  - ii. Exchanged goods must be of equal value
- Advantages
  - i. Low transaction costs

#### Bond based patterns :

- Disadvantages
  - i. Forgery
  - ii. Double-spending
  - iii. High transaction costs
- Advantages
  - i. Flexibility: deferred & multilateral trading

#### B. Pricing :

- Maps a service onto a value (price) -- Price determination
- Communicates price to other peers -- Price dissemination

#### Accounting :

- Aggregates the service value

#### Charging :

- Maps the aggregated value onto a monetary charge

### Problem 6.4

#### A. Prisoner's Dilemma with $U_F = 5$ and $C_F = 2$ :

##### a. Payoff matrix

Peer2		Cooperate	Defect
Peer1	Cooperate	R = 3 R = 3	T = 5 S = -2
	Defect	S = -2 T = 5	P = 0 P = 0

- b. Defection would be the dominant strategy.

B.  $U_F = 2$  and  $C_F = -1$  :

- a. Payoff Matrix

Peer2		
Peer1	Cooperate	Defect
	<div>R = 3</div> <div>R = 3</div>	<div>T = 2</div> <div>S = 1</div>
	<div>S = 1</div> <div>T = 2</div>	<div>P = 0</div> <div>P = 0</div>

- b. Cooperation would be the dominant strategy
- c. No! The inequality here is :  $R > T > S > P$

To be classified as Prisoner's Dilemma, in a strong sense, we need :  
 $T > R > P > S$