CS 372 Introduction to Computer Networks

Self-Check Exercises: Lecture 34

1	The data-link layer	provides logical	communication bety	ween
1,	The data-ink rayer	provides logical	communication oct	vccii

2) What are some of the responsibilities of the link layer?

3) Is it possible for one datagram to be encapsulated into multiple different types of frames as it transits the internet?

4) On a home computer, where is the link layer implemented?

5) On a link with devices 1, 2, ... i, ... N attached, how does device i know that a received frame is intended for it?

6) For an odd-parity machine, the following bytes are received. For each, indicate whether (E) there is at least one error, (N) there is no error, or (?) there may be an error, but it would go undetected. The last bit is the parity bit.

10010110 ____ 10111011 ___ 11110001 ___ 10000011 ___

7) Here are 7 consecutive bytes in a datagram that uses 2-dimensional even parity for error detection/correction.

a.

b.

Byte #	Code	Parity
1	1001110	0
2	1000101	1
3	1010100	1
4	1010111	1
5	1000011	0
6	1010010	1
7	1001011	0
Parity	1011010	0

Which byte has an error?

Show the corrected byte.