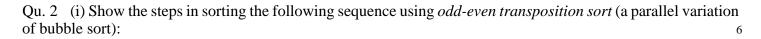
CSCI 3145 Introduction Parallel Programming Final exam Wednesday December 13th, 2000, 12:00 noon to 3:00 pm

Use ad	pt all questions in the spaces provided. Iditional paper if necessary. Trefer to any materials except that provided with this	
Qu. 1	Answer each of the following <u>briefly</u> :	Mark/30
(a)	What is a detached thread?	2
(b)	What is meant by the term thread-safe?	2
(c)	Can:	2
	for $(i = 0; i < 4; i++)$ { $a[i] = a[i + 2];$ }	
be re-v	vritten as:	
	forall $(i = 0; i < 4; i++)$ { $a[i] = a[i+2];$ }	
and sti	ll obtain the correct results? Explain.	

(d)	Very briefly describe how to multiply two 3 × 3 matrices using a systolic array approach.	2
(a)	Vows briefly, avaloin the god block and sing mothed of solving London's agreetion?	,
(e)	Very briefly explain the red-black ordering method of solving Laplace's equation?	4
(6)		
(f)	What is a bitonic sequence?	2
(g)	Very briefly explain the two-dimensional sorting algorithm called Shearsort.	2



4, 2, 7, 8, 5, 1, 3, 6

(ii) Write a shared memory parallel program in Adsmith to sort a list of <i>n</i> integers using <i>odd-even transposition sort</i> . (n is assumed to be a power of two.) An Adsmith program is attached giving sample uses of Adsmith routines. Give a clear explanation of your program.		