Name: \_\_\_\_\_\_ Score: \_\_\_\_

CLOSED BOOK. YOU CAN HAVE ONE SHEET OF NOTES. EACH QUESTION IS WORTH 20 POINTS.

- 1. True or False
- T \_\_\_ F <u>X</u> Atomic transactions guarantee at most once semantics.
- T \_\_\_ F \_X The Windows NT scheduler partitions the CPU time into *epochs*.
- 2. What is the major advantage of *streams* over *datagrams*?

Streams ensure that all messages will arrive in the order they have been sent, without errors and without duplicates.

3. Consider the following set of parameters for a System V resale 4 scheduler with four priority levels:

#ts_c	quantum	ts_tqexp	ts_slpret	ts_maxwait	ts_lwait	LE	VEL
	800	X	1	1000	1	#	0
	400	0	2	1000	2	#	1
	200	1	3	200	3	#	2
	100	2	Y	200	3	#	3

Which are the sole reasonable values for X and Y?

$$X = 1$$
 and  $Y = 3$ 

**4.** How do you pass a *linked list* to a *remote procedure*?

You store the linked list into an array and pass it to the remote server along with instructions describing how to rebuild the list.

5. What is the difference between **blocking sends** and **non-blocking sends**?

A blocking send does not return until the receiving process has actually received the message.

A non-blocking send returns as soon as the message has been accepted for later delivery by the OS.