EE 4770 **Homework 5** **Due: 6 May 1998**

Problem 1: Find the worst case: latency, run time, and response time for the events listed in the table below. To be eligible for partial credit show the event sequences used. Where appropriate, show the load set and the loaded duration. What is the total load on the system?

Event Name	Strong Prior.	Weak Prior.	Handler Run Time	Event Timing
A	3	2	$5\,\mu$s	Periodic, $15\,\mu$s
B	3	1	$4\,\mu$s	Periodic, $22\,\mu$s
C	2	2	$(28 + 2c)\,\mu$s	Periodic, $100\,\mu$s
D	2	1	$400\,\mu$s	Periodic, 1 ms
E	1	1	60 ms	At initialization and 50 ms after each response.

The handler for event C can respond to more than one occurrence of C. The first response is generated in $30\,\mu$s, the second (if needed) is generated $2\,\mu$s later ($32\,\mu$s after the handler starts), the response to event c is generated $(28 + 2c)\,\mu$s after the handler starts, where c is the number of events of type C that have occurred since the handler last completed. The latency for C is the time from the earliest unresponded to event to when the handler starts, even if the handler is to respond to multiple events.