Part 3

I added int32 flags for the order of signals being registered. 1 for XSIGRCV, 2 for XSIGCHL, 3 for XSIGXTM. I added if statements to clkhandler, childwait, and cbhandler (from receive). During testing, I had to use some sleep statements to prevent the test process from killing itself before callbacks were ran.

Part 4

I just made a separate linked list of the memblk elements that were created from getmem. I deleted the element from the linked list when freed by freemem. Kill just frees all the blocks left in the linked list.

This is the output from testing:
250019360 bytes of free. Free list:
0 bytes used. Alloc list:
250017312 bytes of free. Free list:
0 bytes used. Alloc list:
250017312 bytes of free. Free list:
0 bytes used. Alloc list:
250019360 bytes of free. Free list:
0 bytes used. Alloc list:

Before test
Before alloc
ptr = getmem(1024)
freemem(ptr, 1024)
After free
After kill

Bonus

XSIGMY is a signal to suspend the process. Trying to replicate the SIGSTOP from UNIX. Currently does not work properly. Did not have enough time to debug.