Examination Feedback for EEE6032 – Operating Systems
Autumn Semester 2012-13

Feedback for EEE6032 Session: 2012-2013

Feedback: Please write simple statements about how well students addressed the exam paper in general and each individual question in particular including common problems/mistakes and areas of concern in the boxes provided below. Increase row height if necessary.

General Comments:

The perennial comment: Read the question! There were a lot of very good answers... to questions that were not on the exam paper.
Secondly, rewriting the question using only the information given in the exam paper will not gain any marks!

Question 1:

(a) – The common property of privileged instructions. Almost everybody responded by saying that the common property of privileged instructions are that they are privileged. Unsurprisingly, for a Level 6 paper, a slightly greater degree of technical insight was being asked for.
(b) Reasonably well done although the passing of parameters part was typically answered in a very superficial way ("parameters can be passed by the trap instruction"). Actually, this is incorrect.
(c) Read the question. Too may responded by writing, often in great detail, about scheduling.
(d) Similar to the above, too many responded to this part by writing about journalling. Journalling was only used as an example of a feature of a modern file system.

Question 2:

(a) A few bizarre answers but otherwise, straightforward.
(b) Explanation of single-level paged memory – generally OK. One odd and common misconception: That page tables are "searched". Lookup tables require constant access time – they are not searched. Few directly identified the advantage of multi-level page tables - that only such page tables as a actually needed are allocated by a process leading to a (usually significant) saving of memory.
(c) Done either very well or very badly.

Question 3:

(a) Generally OKI.
(b) Some confusion over UNIX and forks (which, of course, do not exist in Windows).
(c) Very few recognised that kernel processes typically perform vital but brief tasks and that just letting them complete without the interruption of context switches is often more efficient.
(d) Generally OK except some thought that Process A terminates as well.
(e) Pipes do NOT use the disk! This seems a common misconception. Also, many thought an advantage of shared memory IPC over pipes is that the two processes do not have to co-exist. In fact, the processes must overlap in time.

Question 4:

(a) Generally OK but some confusion over a build system
(b) The advantage of a shared object library reducing overall memory usage was not clearly identified by many; also, the fact that this sharing is only an advantage if >1 process is using the library was frequently missed.
The difference between shared object and dynamic link libraries was poorly answered.
(c) First part, OK. The second part less well answered. One candidate responded to the question seeking the identity of the two latencies in a real-time system by assuring me that there were indeed two of them!