

**1B11 Operating Systems Coursework**  
December 1999

Answer all questions below.

1. Draw up a table of at least 10 and no more than 15 important characteristics of the DOS and Unix operating systems. You should present your answer as a table similar to the fragment below. Your answer should not extend over more than 2 sides of A4.

<b>Characteristic</b>	<b>DOS</b>	<b>Unix</b>
User population	Single user per machine	Multiple users per machine
Processes		
Machine types		
Min. File Size		
Max. File Size		
Protection		

1. Describe the data structures that are set up when a disk is formatted for a Unix-like system as discussed in lectures. You should assume that the disk is being formatted into 1kB blocks and that 32-bit addresses are used. Choose a suitable disk address for the root directory and justify your choice. You may find it clearest to use annotated diagrams to augment a brief outline of the steps taken.
2. A simple first-come-first-served (FCFS) policy for scheduling processes is not always appropriate. State one such case and a scheduling policy which would be an improvement. Indicate the information that the scheduler would need to implement this policy and how it would get it.

PLEASE NOTE THAT THIS IS GRADED COURSEWORK. A STUDENT WHO FAILS TO COMPLETE IT WILL BE AWARDED ZERO MARKS FOR IT.

THIS COURSEWORK SHOULD BE HANDED IN TO THE DEPARTMENTAL OFFICE NO LATER THAN:

12 noon on Wednesday 12<sup>th</sup> January 2000.

THERE ARE FIXED PENALTIES FOR HANDING YOUR WORK IN LATE -- THEY ARE:

<= 2 WORKING DAYS 10% OF MARK OBTAINED

> 2 WORKING DAYS 100% OF MARK OBTAINED