

2004 Paper 1 Question 12

Operating Systems

- (a) *System calls* are part of most modern operating systems.
- (i) What is the purpose of a system call? [2 marks]
 - (ii) What mechanism is typically used to implement system calls? [2 marks]
- (b) Process scheduling can be *preemptive* or *non-preemptive*. Compare and contrast these approaches, commenting on issues of simplicity, fairness, performance and required hardware support. [8 marks]
- (c) Briefly compare and contrast the notion of *process* in the Windows XP and UNIX operating systems. Describe the scheduling algorithms used in each case. [8 marks]