

2001 Paper 1 Question 11

Operating Systems

- (a) Describe how the CPU is allocated to processes if static priority scheduling is used. Be sure to consider the various possibilities available in the case of a tie. [4 marks]
- (b) “All scheduling algorithms are essentially priority scheduling algorithms.”
Discuss this statement with reference to the first-come first-served (FCFS), shortest job first (SJF), shortest remaining time first (SRTF) and round-robin (RR) scheduling algorithms. [4 marks]
- (c) What is the major problem with static priority scheduling and how may it be addressed? [4 marks]
- (d) Why do many CPU scheduling algorithms try to favour I/O intensive jobs? [2 marks]
- (e) Describe how this is achieved in the (i) UNIX and (ii) Windows NT operating systems. [3 marks in each case]