2008 Paper 1 Question 7

Operating Systems

(*a*) What is *file metadata*?   [2 marks]

(*b*) Explain with the aid of a diagram how file metadata is managed in:

    (*i*)   the Unix file-system;   [4 marks]

    (*ii*) the FAT32 file-system;   [4 marks]

    (*iii*) the NTFS file-system.   [4 marks]

(*c*) A researcher suggests using non-volatile flash memory to store the NTFS log file. He believes this will *improve performance*, *reduce power consumption* and make the system *more resilient to failure*. Is he right? Briefly justify your answer in each case.   [2 marks each]