2004 Paper 1 Question 4

Operating Systems

(*a*) Modern computers store data in a variety of "memories", each with differing size and access speeds. Briefly describe each of the following:

    (*i*)   cache memory;   [2 marks]

    (*ii*) main memory;   [2 marks]

    (*iii*) registers.   [2 marks]

(*b*) Give an example situation in which operating systems effectively consider disk storage to be a fourth type of "memory". [2 marks]

(*c*) A researcher proposes using fast non-volatile memory for *all* data, rather than using the four separate kinds of "memory" mentioned above. Comment on the pros and cons of this approach. [2 marks]

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