1995 Paper 4 Question 7

Operating System Functions

An operating system for a *smart card* is required — that is a common run-time system for the smart card, which hosts some set of applications loaded into the card at the time the card is issued.

What operations should the memory management component of the operating system support in such a system? [12 marks]

The hardware engineers are concerned about complex memory management hardware consuming too much power, but the customer demands memory protection between the applications. Describe some solutions that could meet these demands. [8 marks]