Concurrent Systems

(a) A software module controls a car park of known capacity. Calls to the module's procedures \textit{enter()} and \textit{exit()} are triggered when cars enter and leave via the barriers.

Give pseudocode for the \textit{enter} and \textit{exit} procedures

(i) if the module is a monitor [8 marks]

(ii) if the programming language in which the module is written provides only semaphores [4 marks]

(b) Outline the implementation of

(i) semaphores [4 marks]

(ii) monitors [4 marks]