Operating System Foundations

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

Give pseudocode for the `enter` and `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]