

# 1993 Paper 7 Question 1

## Distributed Systems

A distributed software system follows the client-server model. The microkernel on which it is based supports multi-threaded processes. A remote procedure call (RPC) package is used for client-server interactions. The RPC system runs above an unreliable, datagram-based communications service.

- (a) Explain how timers may be used in the RPC protocol to achieve client-server synchronisation. [10 marks]
- (b) Discuss how the RPC system may support the location of remote procedures. [7 marks]
- (c) Discuss the requirements on the RPC system that follow from the use of multi-threaded processes. [3 marks]