
Question 1

For each of the following use a block diagram to indicate the inputs, outputs, and controls, and give a short (2-4 lines) explanation of what it does. Concentrate on the function of the circuit, rather than the details of its implementation.

- A register (e.g. a 32-bit register).
- A multiplexer (e.g. a 8-to-1-line multiplexer).
- A decoder (e.g. a 4-to-16-line decoder).
- A binary counter.
- A RAM chip (e.g. a 64K × 8 RAM chip).

10% of the assignment mark is for typesetting. Figures and special symbols can be drawn/written by hand.