

A2 Architecture Test

Your Name:

(A)

A microprocessor control system contains the following sub-systems:

an address bus, a clock, a databus, an input port, an output port, RAM, ROM.

Select the most appropriate sub-system from the list above for the following functions:

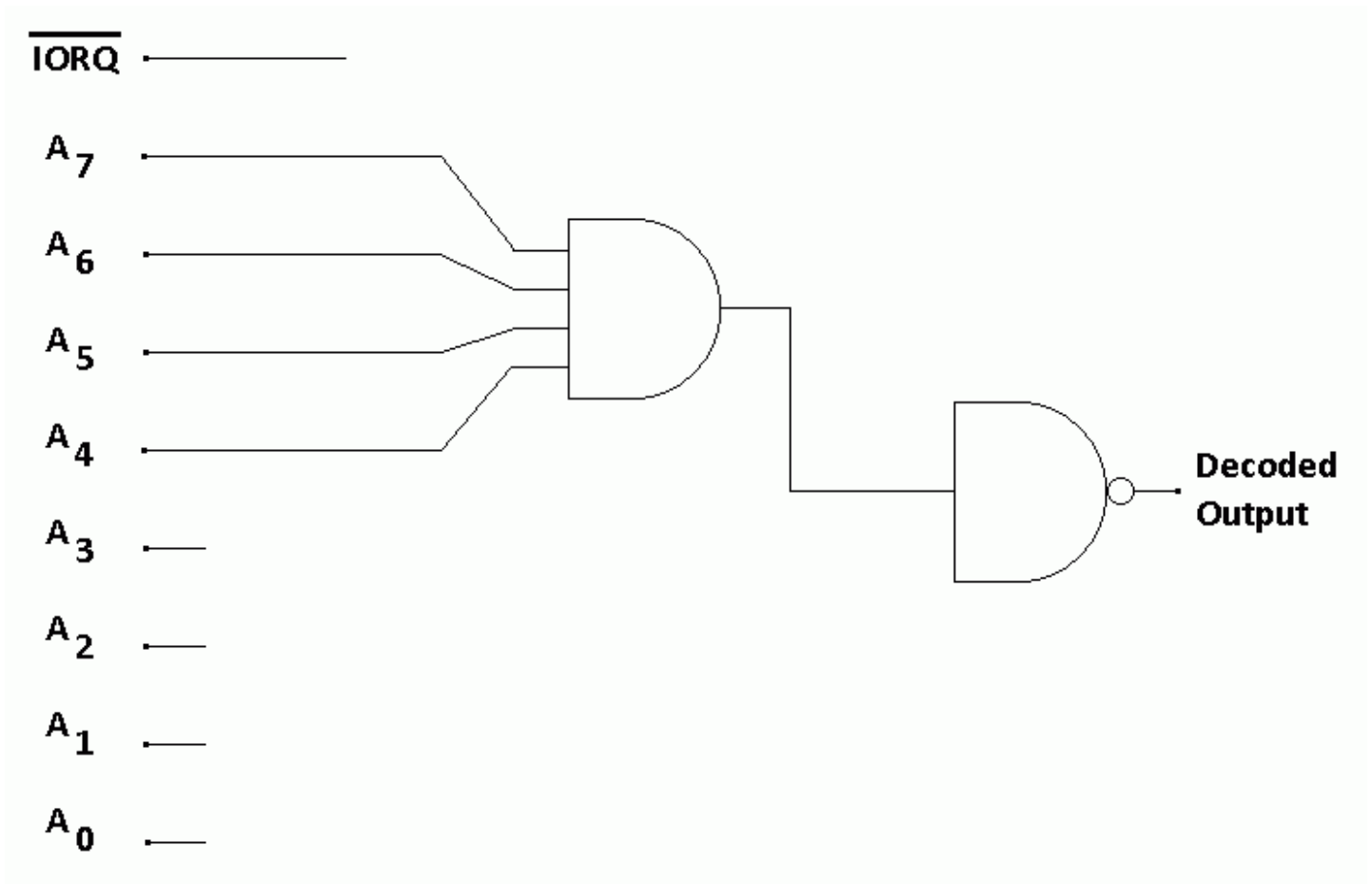
1. carries data within the control system,
2. keeps all internal operations of the control system synchronised,
3. provides temporary storage of data,
4. is connected to a keyboard,
5. carries information used to select a required memory element.

(5 marks)

(B)

An input port is to be I/O mapped at 0xF8 on a microprocessor control system.

1. In binary, what is the address of the port?
2. The address decoder for the input port is required to give logic 0 when the port is addressed and IORQ is logic 0. The decoder is partly drawn below. Complete the diagram using any other logic gates that you need.



(5 marks)