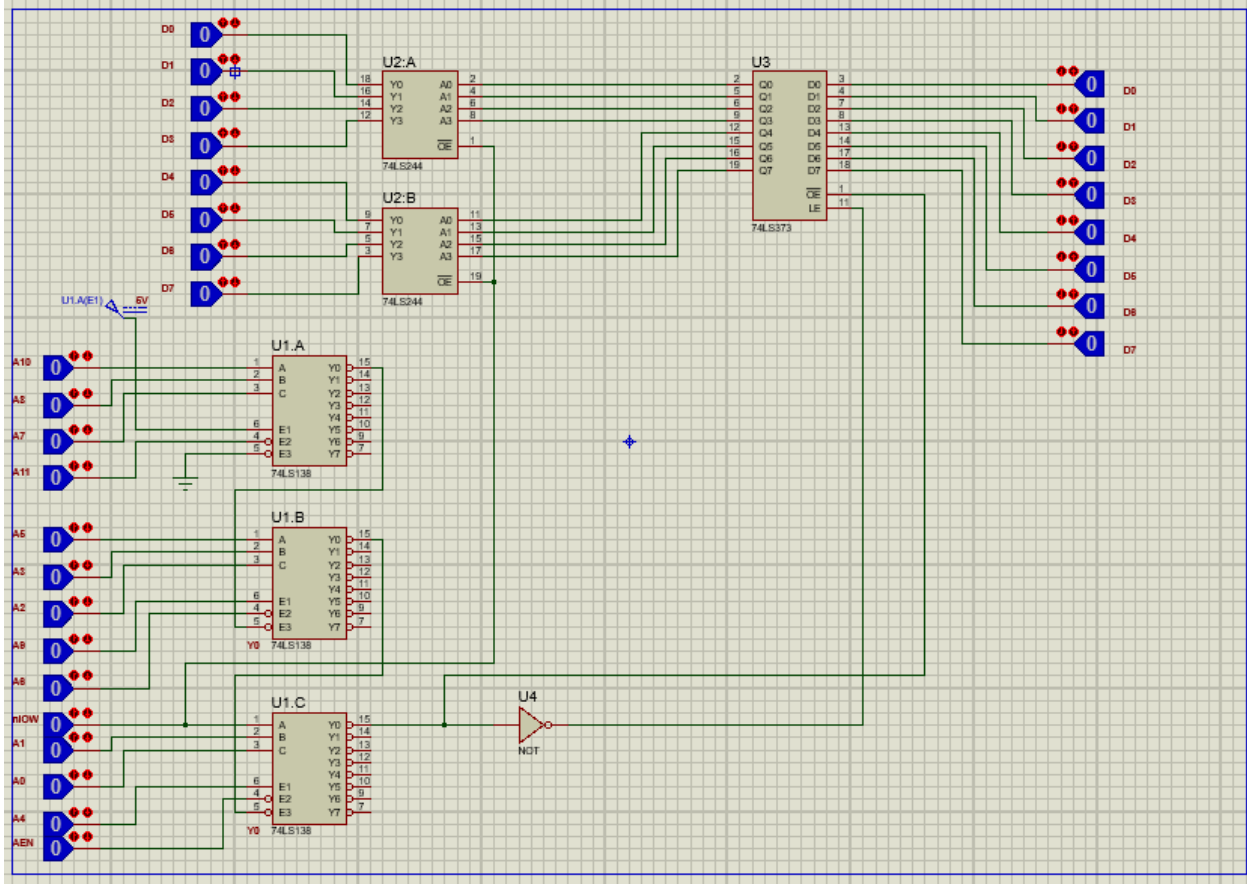


a. Assumptions:

- Address bus is considered 16-bits
- Address 210h is not used by the processor for other devices

b. Simulate your design in Proteus [20 Marks]



d. Briefly explain the importance of using nIOW, nIOR, AENs line in an ISA bus based interface design.[20 Marks]

Using ISA bus based interface we can write and read data from outside for that IOW(write enable signal) and IOR(read enable signal) are used and they are active low signals. IOW can be used to write data from interface to outside( ex: display output of using seven segment) in this case IOW should be 0(low) and IOR should be 1(high). IOR can be used to write data from outside to the PC (interface card) in this case IOR should be 0(low) and IOW should be 1(high).

AEN is used to enable address when AEN is high the Direct Memory Address(DMA) is going on. When AEN is low normal address cycle is happening therefore in this case AEN should be always low(0).