



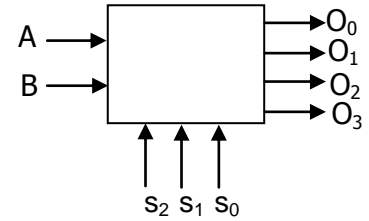
BLG 231E - Digital Circuits Assignment 4

Due Date: 29.11.2012, **Thursday**, 17.00.

- Write your answers to the **Answer Sheet** provided in “Sınıf Dosyaları” folder at the *nino-va* system. Any other paper will not be accepted.
- Plagiarized assignments will be given a negative mark.
- **No late submissions** will be accepted.

Submissions: Please submit your solutions to the Digital Circuits Course Assignment Box at the department secretary’s office.

1. The combinational digital circuit shown in the figure have two data inputs (**A,B**) and four outputs (**O0,O1,O2,O3**). The circuit transmits the value of A or B to one of the desired output line according to the value at the selector lines (s_2,s_1,s_0). At that time, the other output lines should be at logic ‘1’.



- The selector line s_2 selects which of the input line will be transmitted to the output lines. If $s_2=0$ input A, otherwise input B will be transmitted.
- The selector lines s_1 and s_0 determine the output line which the input data will be transmitted. If $s_1s_0=00$ data will be transmitted to O_0 , $s_1s_0=01$ data will be transmitted O_1 and etc. The other output lines should be at logic ‘1’.

Implement the defined circuit using a multiplexer with proper size, a decoder and required logic gates.