

- 1) Create code for an asynchronous 5 bit barrel shifter with a falling edge load_bar signal to initialize the shifter. Inputs: 5 bit data word to be loaded, loadb signal to load the input, 3 bit shift value(ignore shift values > 4), 1 bit direction value. Outputs: 5 bit shifted output. 40pts

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2) Synthesize your barrel shifter and provide the RTL

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3) Simulate your barrel shifter, provide the testbench and simulation results 40pts