

Faculty of Engineering and Technology

Department of Electrical and Computer Engineering

Digital Electronics and Computer Organization

ENCS 2110

**Experiment No. 6 - Sequential Logic Circuits using Breadboard and IC’s**

pre Lab 6

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Section : 1

1. **What is the appropriate display type (common anode/common cathode) that must be used with 7447 display decoders? Explain your answer.**

The appropriate display type for 7447 decoders is **common anode**, as the 7447 provides active-low outputs. This means the outputs go low when the corresponding segment should light up, which works with a common anode display that illuminates when the cathode is pulled to ground.

1. **Assuming that the turn-on voltage for the LEDs is 1.7v, what is the proper value of the resistors to be connected between the 7447 decoder and the seven-segment display, to limit the current in the LED segments to 10mA?**

VR = 5 – 1.7v = 3.3 v

R = V/I so 3.3 / 10m \*10^-3 = 330Ω

he correct resistor value is 330Ω.

1. **Assume that the resistors provided in the lab are 220Ω. What would the current flowing in to the LEDs be?**

R = V/I so 3.3 / 220 = 0.015Ω = 15mA