HW5 1   B. CONNOR McCLELLAN

1. a.   From Splatalogue, $A_{10} = 10^{-7.14246}$
                            $A_{21} = 10^{-6.16050}$

   And From Green + Chapman (1978)

   $$\gamma_{10} = 2.8 \times 10^{-11}$$
   $$\gamma_{21} = 3.8 \times 10^{-11}$$

   $$n_{crit} = \frac{A_{ul}}{\gamma_{ul}} \implies \boxed{\begin{array}{l} n_{crit,\,10} = 2572.7 \text{ cm}^{-3} \\[2mm] n_{crit,\,21} = 18185.1 \text{ cm}^{-3} \end{array}}$$