10.2 (a) $t_{pd} = 500 - (50 + 65 + 50) = 335$ ps;

10.4 (a) $t_{cd} = 30 - 35 + 50 = 45$ ps;

10.23 Solve for T_c:

$$100 \text{ years} = \frac{T_c e^{\frac{T_c}{54 \text{ ps}}}}{(10^7)(21 \text{ ps})} \Rightarrow T_c = 1811 \text{ ps}$$