

### Special Problem 3.3-5

A junction diode has been **replaced** in the circuit below with a **PWL model**.

The PWL model has  $r_d = 10 \Omega$ , and the PWL model provides a value  $v_D = 0.64 \text{ V}$  if (and only if)  $i_D = 10 \text{ mA}$ .

Determine the approximate junction diode values  $v_D$  and  $i_D$  in the circuit below.

**Hint:**  $v_D \neq 0.64$ , and  $v_D \neq V_{D0}$ , and  $i_D \neq 10.0 \text{ mA}$

