



$$I_{C2} = (150 \mu A)(14) = 600 \mu A$$

$$h_{FE} = 60$$

$$I_{B2} = \frac{I_{C2}}{h_{FE}} = \frac{600 \mu A}{60} = 10 \mu A$$

$$I_{B2} = I_{C1} = 10 \mu A$$

$$V_{B2} = 5V - V_{BE, SAT} = V_{CE, SAT} = 5V - (1.2V) = (0.25V) \quad @ I_{C1} = 10 \mu A$$

$$R_{B2} = \frac{V_{B2}}{I_{B2}} = \frac{3.55V}{10 \mu A (1.3)} = 273 \rightarrow 270 \Omega$$

$$I_{C1} = 10 \mu A \quad h_{FE} = 110$$

$$I_{B1} = \frac{I_{C1}}{h_{FE}} = \frac{10 \mu A}{110} = 0.0909 \mu A$$

$$R_{B1} = \frac{V_{B1}}{I_{B1}} = \frac{10 \mu A}{0.0909 \mu A} = 110 \Omega \rightarrow 1210/3225 \text{ for } \frac{1}{2} V$$

$$V_{B1} = 3.3V - V_{BE, SAT} = 3.3V - 0.7V = 2.6V$$

$$R_{B1} = \frac{V_{B1}}{I_{B1} (1.3)} = \frac{2.6V}{(90.9 \mu A)(1.3)} = 22k \rightarrow 22k \Omega$$

$$V_{B1} = 3.3V - V_{BE, SAT} = 3.3V - 0.7V = 2.6V$$

$$V_{BE, SAT} = 0.7V \quad @ I_{C1} = 10 \mu A$$

$$R_{B1} = \frac{V_{B1}}{I_{B1} (1.3)} = \frac{3.3 - 0.7}{(31.8 \mu A)(1.3)} = 62.893k \rightarrow 62k \Omega$$

$$R_{B2} = 620k \Omega$$