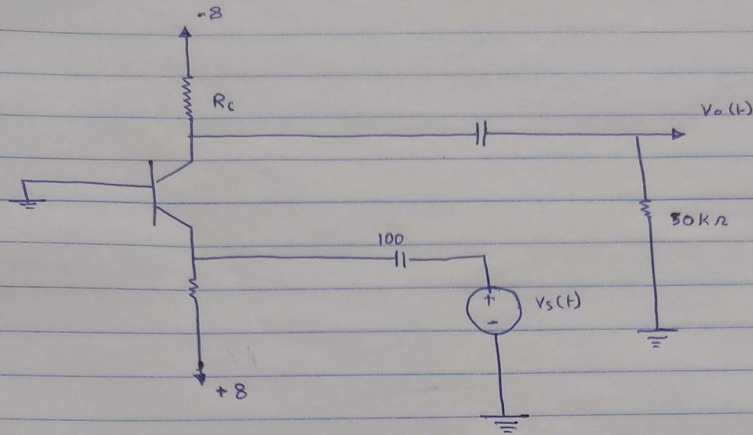


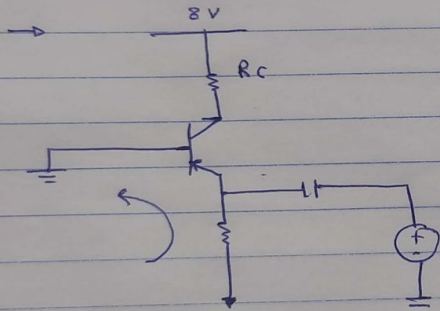
Essay Question

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II RE



$I = 0.99 \text{ mA}$

①  $I_B = \frac{I_E}{\beta + 1} = 9.21 \mu\text{A}$

$I_C = \beta I_B = 0.92 \text{ mA}$

Apply KVL  $R_E I_E + 0.7 = 8$

$\therefore R_E = \frac{8 - 0.7}{0.93} = 7.85 \text{ k}\Omega$

$$\boxed{2} \quad R_C = ?$$

$$- h_{fb} = \frac{\beta}{\beta + 1} = \alpha = \frac{100}{101} \\ = 0.99009$$

$$- h_{ib} = \frac{V_T}{I_E} = \frac{26}{0.93} = 27.957 \Omega$$

To find  $R_C$  :-

$$R_C \parallel 50 = 2.89 \text{ K}$$

$$\frac{R_C + 50}{R_C + 50} = 2.89 \text{ K}$$

$$R_C (50 + 2.89) = 50 + 2.89$$

$$R_C = 2.89 \text{ K}\Omega$$



