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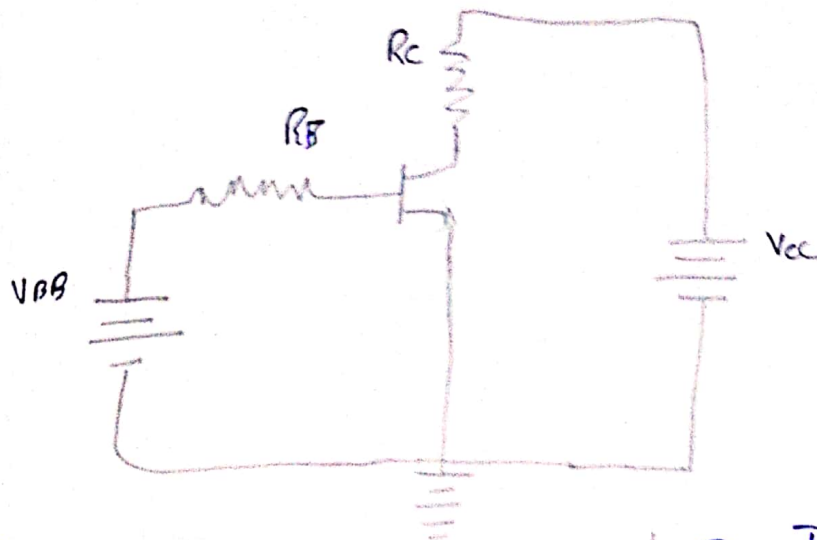
Data:

$V_{BB} = 7.5v$
$V_{cc} = 17v.$

$R_B = 250\Omega$

$\beta_{DC} = 150$

$R_c = 30k\Omega$
$V_{CE} = ?$
$I_c = ?$

Solution:

① $I_c = \beta_{R} \cdot I_B$

∴ $V_{BB} = I_B \times R_B$

∴ $7.5 = I_B \times 250$

$\boxed{I_B = 0.03 \, amp.}$

① ∴ $I_c = 0.03 \times 150$

$\boxed{I_c = 4.5 \, amp.}$

② ∴ $V_{CE} = V_{cc} - I_c R_c$

$V_{CE} = 17 - (4.5)(30,000)$

$\boxed{V_{CE} = 134958v}$