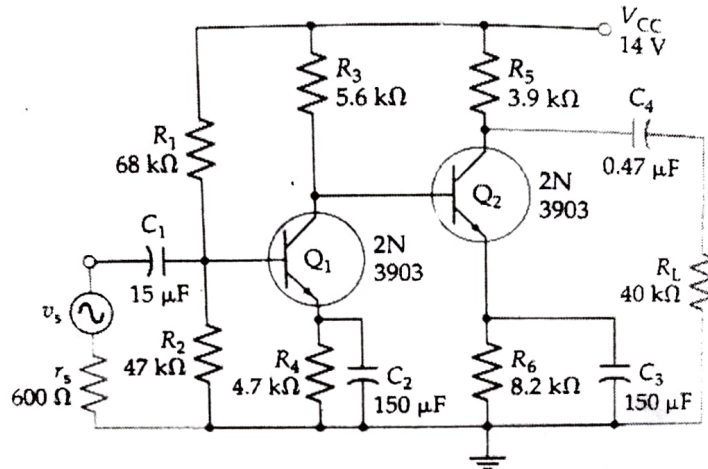


Note: Attempt all questions

1. Calculate the overall voltage gain of the Fig.1 circuit?

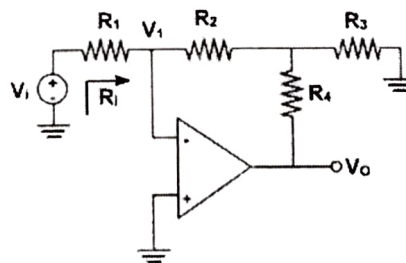
5



$\beta_{MFE} = 50$
 $r_{ie} = 2k\Omega$

2. Find the gain of V_O / V_i of the circuit of Fig.2

3



3. Define Input offset Voltage and Slew rate 2
4. Derive the expression for frequency of oscillation for BJT based phase shift oscillator 5
5. Fig-3 depicts the bipolar feedback amplifier. Assuming $R_1 + R_2$ is not very large, $\ll \beta < \infty$ and $V_A = \infty$, Determine the closed-loop voltage gain, input impedance and output impedance. 5

