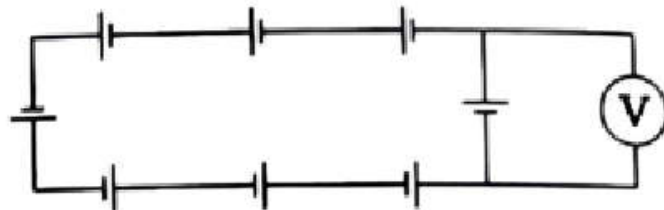


Q 08 In the given circuit, each battery is 5 V and has an internal resistance of 0.2Ω . The reading in the ideal voltmeter V is V. (1997)



Sol. Let $E = 5 \text{ V}$ and $r = 0.2 \Omega$. Apply Kirchhoff's loop law, $8E - 8ir = 0$, to get $i = \frac{E}{r} = 25 \text{ A}$. The voltmeter reads $V = E - ir = 0 \text{ V}$.

Ans. zero \square