

36 A typical mobile phone battery has an e.m.f. of 5.0 V and an internal resistance of $200\text{ m}\Omega$.

What is the terminal p.d. of the battery when it supplies a current of 500 mA ?

A 4.8 V

B 4.9 V

C 5.0 V

D 5.1 V

37 The circuit diagram consists of a cell of e.m.f. 2.0 V and a variable resistor. The variable resistor is set so that the current in the circuit is 0.50 A . The terminal p.d. of the cell is 1.8 V . The internal resistance of the cell is