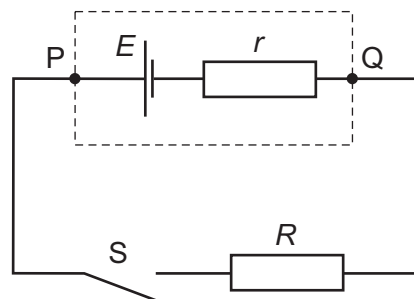


- 36** A cell of e.m.f. E and internal resistance r is connected in series with a switch S and an external resistor of resistance R .



The p.d. between P and Q is V .

When S is closed,

- A** V decreases because there is a p.d. across R .
- B** V decreases because there is a p.d. across r .
- C** V remains the same because the decrease of p.d. across r is balanced by the increase of p.d. across R .
- D** V remains the same because the sum of the p.d.s across r and R is still equal to E .

Space for working