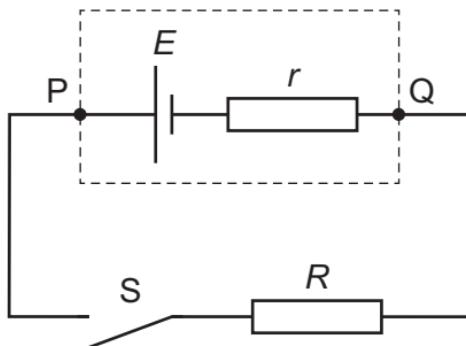


- 36 A cell of electromotive force (e.m.f.) E and internal resistance r is connected in series with a switch S and an external resistor of resistance R .



The potential difference (p.d.) between P and Q is V .

Which statement is correct when S is changed from open to closed?

- A V increases 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 .

- 37 What is a good definition of charge Q ?