

**34** A simple circuit comprises a source of electromotive force (e.m.f.) connected to a load.

How does the output power  $P$  of the source depend on the internal resistance  $r$  of the source and the resistance  $R$  of the load?

**A**  $P$  is independent of both  $r$  and  $R$ .

**B**  $P$  depends on  $r$  but not on  $R$ .

**C**  $P$  depends on  $R$  but not on  $r$ .

**D**  $P$  depends on both  $r$  and  $R$ .