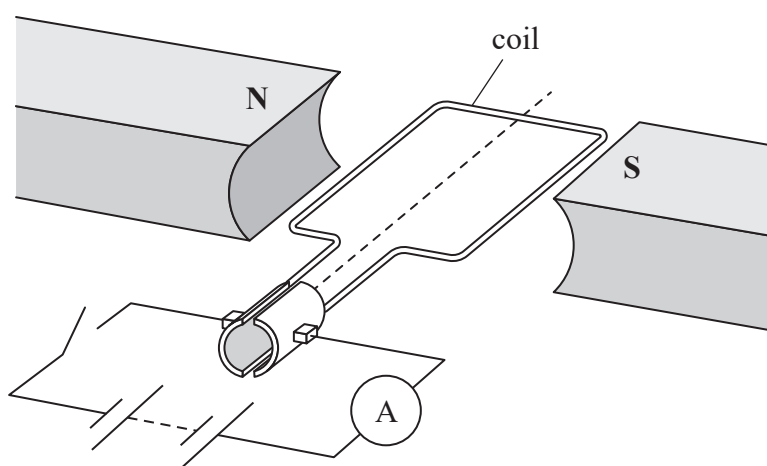
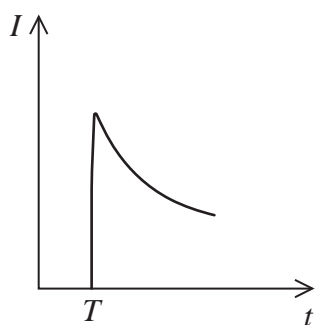


12 A simple electric motor consists of a coil that is free to rotate in a magnetic field.

A student connects the motor to an ammeter and a battery.



The graph shows how the current I in the coil varies with time t . The switch is closed at time T .



Explain why the current rises to a maximum then decreases.
Your answer should include a reference to Faraday and Lenz's laws.

(6)