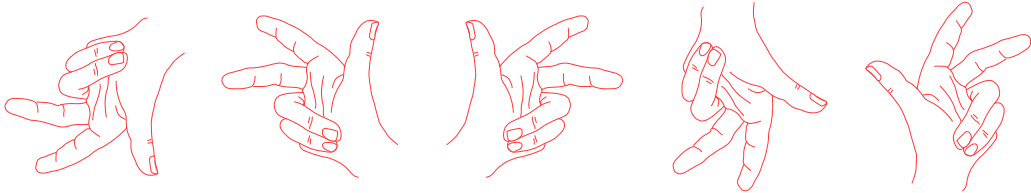


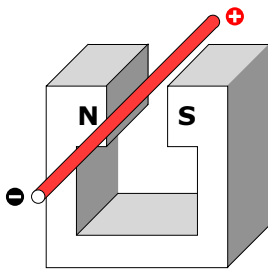
Electromagnetism 3

Name & Set

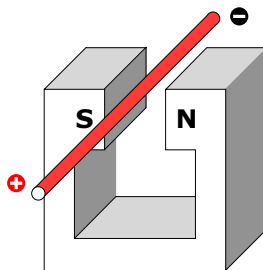
1 Spot the odd man out and circle it.



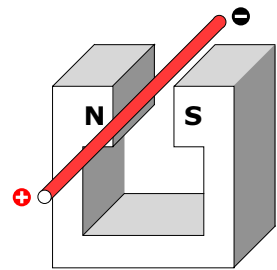
2 (a) Draw an arrow on the conductor in these diagrams to show which way it will move when current flows as indicated.



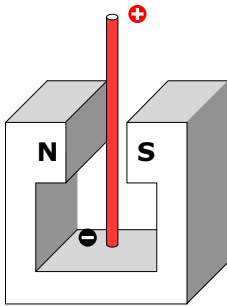
a



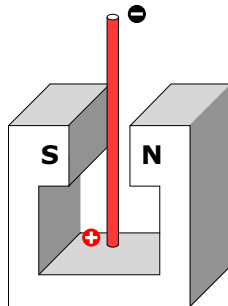
b



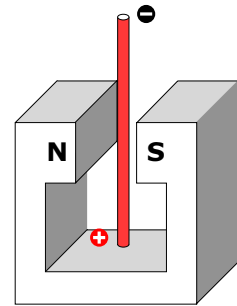
c



d

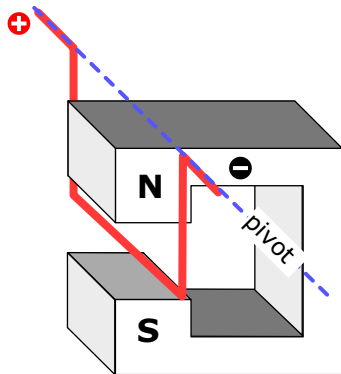


e

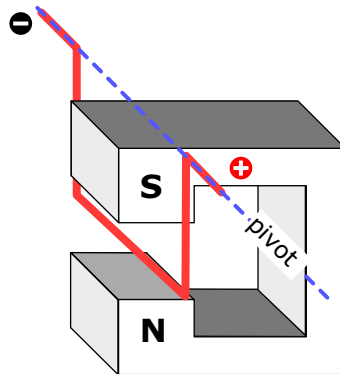


f

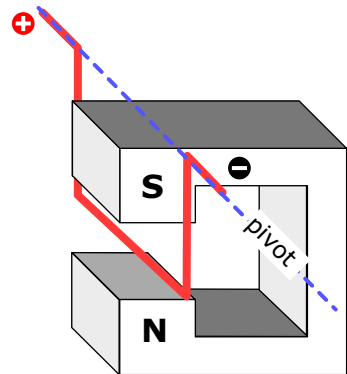
(b) In which direction in the diagrams below will the pivoted wire swing as current flows through it in the direction indicated.



a

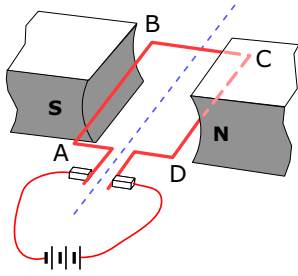


b



c

FORCE ON A CONDUCTOR



a

2 Diagrams (a) to (e) show a wire loop rotating between the poles of an electromagnet.
 (a) Into what forms of energy does the electric motor convert electrical energy into?

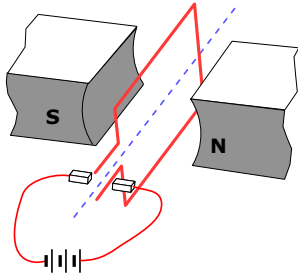
_____ [2]

(b) Which of these is the useful energy output?

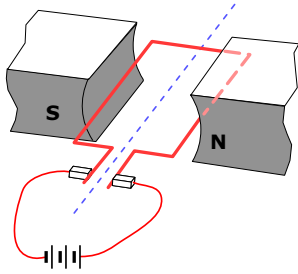
_____ [1]

(c) What is the preferred material used to wind the coils of an electric motor? Explain your answer.

 _____ [2]



b

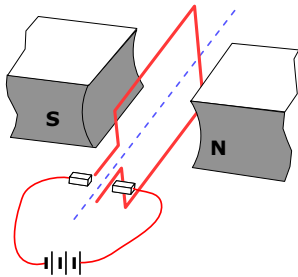


c

(d) Which way around the loop does the current flow in diagram (a): ABCD or DCBA?

_____ [1]

(e) Draw an arrow on the sides AB and CD of the loop to show which way each of these will move when current flows in the direction indicated. [2]

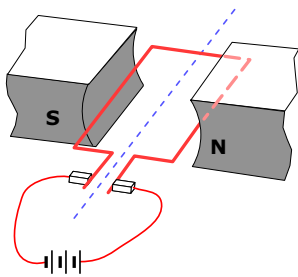


d

(f) Does the loop spin clockwise or anticlockwise? Draw an arrow on diagram (b) to show which way it spins. [1]

(g) Label the corners of the coil in diagram (c) [1]

(h) Draw an arrow on the sides AB and CD of the loop to show which way each of these will move when current flows in the direction indicated. [2]



e

FORCE ON A CONDUCTOR