Magnets And Their Characteristics

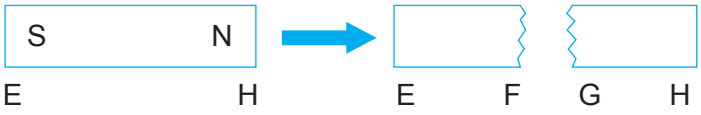
For each of the questions, choose the correct option and write its number (1, 2, 3 or 4) in the brackets.

1. Which of the following things can be turned into a magnet?

   A. a steel bar
   B. a plastic rod
   C. an iron nail
   D. a copper wire

   (1) A and C only
   (2) B and D only
   (3) C and D only
   (4) A, B and C only ( )

2. Carl had accidentally broken his bar magnet into half as shown in the diagram below.



   Which of the following correctly show the poles of the two separate magnets?

	Poles of the magnets			
	E	**F**	**G**	**H**
(1)	S	N	N	S
(2)	S	N	S	N
(3)	S	N	N	N
(4)	N	S	S	N

( )

3. The magnetic force can pass through _____.

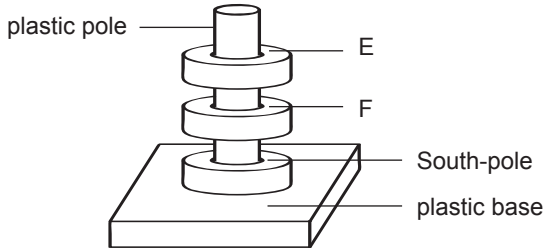
   A. a piece of coloured paper
   B. a sheet of clear plastic
   C. a sheet of nickel
   D. a piece of glass

   (1) A and B only
   (2) B and C only
   (3) A, B and D only
   (4) A, B, C and D ( )

4. Simon placed a few aluminium strips, copper wires, a handful of iron filings and cobalt dust into a big beaker. He then used a big magnet to attract the materials. Which of the materials would be attracted by the magnet?

   (1) the cobalt dust only
   (2) the iron filings and cobalt dust
   (3) the iron filings and copper wires
   (4) the aluminium strips and copper wires ( )

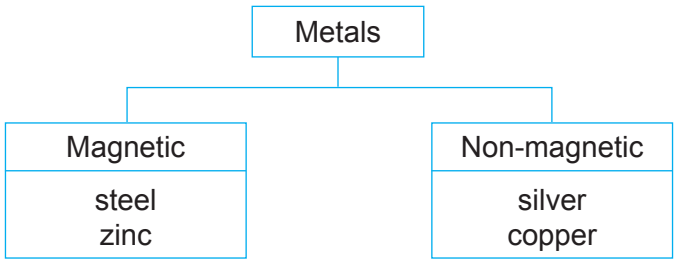
5. Study the diagram below.



   E is the _____ pole while F is _____ the pole.

   (1) North, North
   (2) South, South
   (3) North, South
   (4) South, North ( )

6. Study the classification diagram below.



   Which metal has been grouped wrongly?

   (1) steel
   (2) zinc
   (3) silver
   (4) copper ( )

Answers

Magnets And Their Characteristics

1. **(1)**
   The steel bar and the iron nail are made of magnetic materials, so they can be made into magnets.
2. **(2)**
   When the bar magnet becomes two separate magnets, the ends where the original poles were remain the same. Pole E was the South-pole, so Pole F will become the North-pole. Pole H was the North-pole, so Pole G will become the South-pole.
3. **(3)**
   Magnetism can pass through non-magnetic materials like the coloured paper, clear plastic and glass. The sheet of nickel is a magnetic material.
4. **(2)**
   Among the four materials, only the iron filings and cobalt dust are magnetic materials. Hence, only both of them will be attracted by the magnet.
5. **(4)**
   The magnets are seen to be floating on top of one another. This goes to show that the poles facing each other are like poles because like poles repel.
6. **(2)**
   Zinc is a non-magnetic material, so it should be placed under non-magnetic materials.