Class- 6th

Subject- Science

Chapter- 13

Fun with Magnets

Exercise Questions

1. Fill in the blanks in the following:

Solution:

(i) cylindrical.

(ii) magnetic.

(iii) magnetic.

(iv) magnet.

(v) two.

2. State whether the following statements are true or false:

Solution:

i) False

ii) False

iii) True

iv) False

v) True

vi) True

vii) False

3. It was observed that a pencil sharpener gets attracted by both the poles of a magnet although its body is made of plastic. Name a material that might have been used to make some part of it.

Ans: Iron might have been used to make some part of it.

4. Column I shows different positions in which one pole of a magnet is placed near that of the other. Column II indicates the resulting action between them for each situation. Fill in the blanks.

Solution:

N-N Repulsion

N- S Attraction

S-N Attraction

S– S Repulsion

5. Write any two properties of a magnet.

Ans: Properties of a magnet are as follows:-

i) It attracts objects made of Nickel, Cobalt and Iron.

ii) Magnet directs the side in north and south direction.

6. Where are poles of a bar magnet located?

Ans: On two ends of a bar magnet.

7. A bar magnet has no markings to indicate its poles. How would you find out near which end is its north pole is located?

Ans: A bar magnet is hanged in the air and the end pointing to the north is the north pole of the magnet.

8. You are given an iron strip. How will you make it into a magnet?

Ans: i)Take a bar magnet and keep in contact with one of its poles with one edge of the bar of iron.

ii) Without lifting the bar magnet, move it along the length of the iron bar till you reach the other end.

iii) Lift the magnet and bring the pole (the same pole you started with) to the same point of the iron bar from which we began.

iv) Move the magnet again along the iron bar in the same direction as you did before.

v) Repeat this process for about 30-40 times.

9. How is a compass used to find directions?

Ans: A compass always shows north and south direction, by keeping this as a reference we can always find east and west directions also.

10. A magnet was brought from different directions towards a toy boat that has been floating in water in a tub. Affect observed in each case is stated in Column I. Possible reasons for the observed effects are mentioned in Column II. Match the statements given in Column I with those in Column II.

Solution:

4

3

5

1

2

Additional Questions:-

Q.1 What are magnetic materials?

Ans: The materials which get attracted towards the magnets are called magnetic materials. Example- Iron (Fe), Cobalt (Co), Nickel (Ni).

Q.2 What are non-magnetic materials?

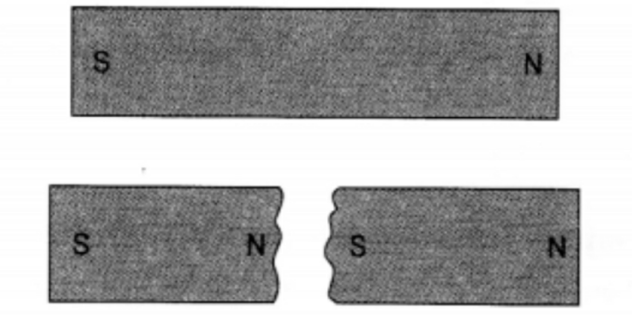
Ans: The materials which do not get attracted towards the magnets are called non-magnetic materials. Example- wood, plastic, paper, glass, rubber, leather.

Q.3 Expalin attraction and repulsion between magnets.

Ans: Two magnets attract each other when their unlike (opposite) poles come close to each other. And, two magnets repel each other when their like (same) poles come close to each other.

Q.4 What will happen to the magnet when we cut it into two pieces?

Ans: When we cut a bar magnet into two pieces, both these pieces act as magnets and we get two magnets.



Q.5 Does the compass needle point in different directions?

Ans: The compass needle has a magnetic needle closed in a glass covering. The needle can rotate on its pin pointed base. Its red marked end always indicates towards the north direction. We use it to find out the direction.

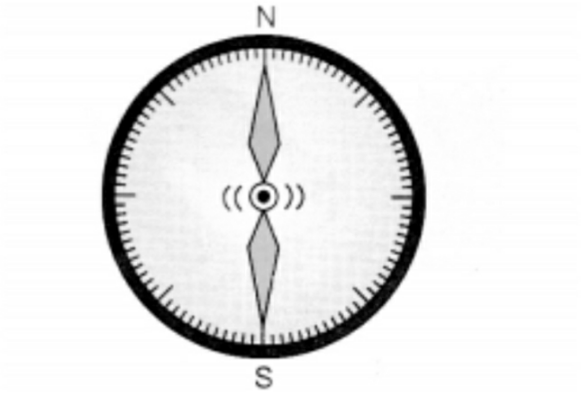


Fig. 13.5. Magnetic compass