Cosmo School

G. Science | **Worksheet 2 : 22/09/2020** | **Class - VII**

CHAPTER 10 : PHENOMENA OF ELECTRICITY & MAGNET

Instructions:

- ✓ Read the chapter in your book - quickly and thoroughly, preferably more than once.
- ✓ Watch the uploaded video class from school's website/YouTube channel. For becoming more clear about the basics, watch more than once, if needed.
- ✓ Contact me in case of any difficulty in understanding.

Cognitive Questions (Mark 1)

1. What is magnet?

Ans.: Magnet is a kind of energy which has attractive and repulsive properties.

2. What is magnetic substance?

Ans.: The substance that are attracted by a magnet and can be transformed in magnets are called magnetic substance.

3. What is non-magnetic substance?

Ans.: The substance that is not attracted by a magnet is called non-magnetic substance. Copper, aluminium, brass, wood, silver, plastic etc are non-magnetic substance.

4. What are the poles of a magnet?

Ans.: The places in a magnet where the resultant attractive force appears to be concentrated are called the poles. The poles are at the nears to the ends of the magnet. There are two poles. One is north pole and another one is south pole.

Analytical Question (Mark-2)

1. How magnetic substance can be transformed into magnet?

Ans.: Magnetic substance can be transformed into magnet in many artificial ways. Rubbing and electrical method have been described here.

Method of Rubbing: A bar magnet and a steel bar is needed for this. Rub the steel bar from one to another end with a pole of bar magnet. We have to do this for several times. after that we will see steel bar attracts pin. Thus, a steel bar is converted into a magnet through rubbing. If it has been rubbed through north pole of the magnet, it will be seen that north pole will be created at the first portion of rubbed steel bar and south pole at the end.

Electrical Method: Take a long iron nail. Coil it with ordinary electrical wire available in the market. Connect its two ends with a battery's two ends. Now it is seen that any part of the nail can attract a pin. The nail does not attract a pin if the electric current flow is stopped. So it is understood that, the nail has been converted into a temporary magnet. Strength of electromagnet depends on the flow of electric current through it.

2. Explain that the earth is a huge magnet.

Ans.: If a bar magnet suspended by tying it with a thread at the middle, the magnet practically lay pointing north to south. It happens because of terrestrial magnets. The feature of a bar magnet in a globe is similar to that of terrestrial magnets. The effect of terrestrial magnet exists everywhere. Two poles of suspended bar magnet indicates two poles of earth magnet. Here the north pole of a bar magnet indicates the north direction. But a north pole always attracts a south pole. This is why the south pole of earth magnet works as north pole. In this way, it gets clarified that the earth is a vast magnet.

Creative Questions

(Solve yourself)

1. Samiha has a bar magnet. She prepared a magnet by rubbing method and another by electrical method.

a) Describe the first method of preparing magnet.

b) "The second type of magnet is strong though temporary" - analyze with explanation.

2. Observe the following figures carefully and answer the questions.

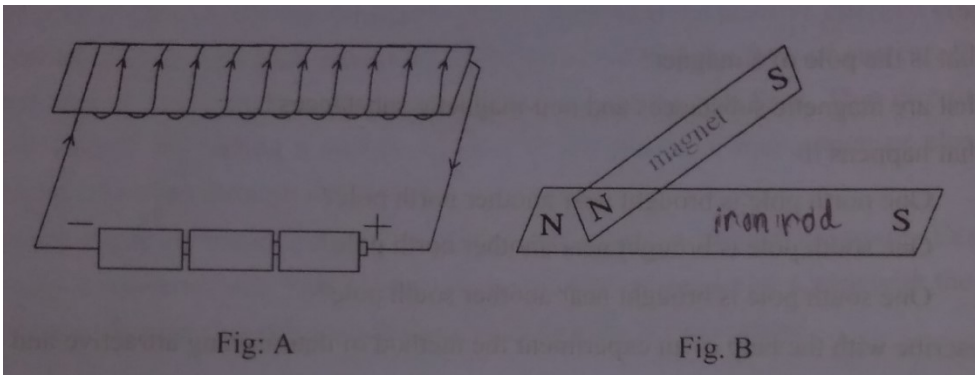
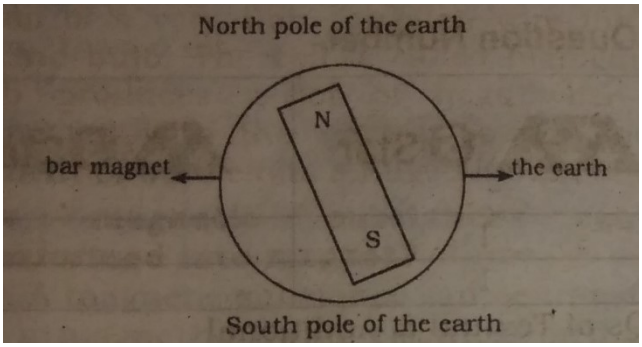


Fig: A Fig. B

a) Explain what change would happen if the use of electric flow in the circuit 'A' is made less.

b) Which process of the above will you give preference in case of making magnet?

3. Observe the following figure carefully and answer the questions.



a) Make a list of the practical necessities of magnet.

b) "The earth is vast magnet" - highlight the proposition.