



# PHYSICS

## BOOKS - ICSE

### MAGNETISM

**Questions Choose The Correct Option To Fill In The Blank**

1. Magnetic force can work ..... (over a distance/only on contact).



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2. Magnetite is a naturally occurring substance that has .....(magnetic/non magnetic) properties.



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3. What is a magnetic compass ? State its use.



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4. Artificial magnets can be found in .....  
(only one/different) shape(s) and size(s)



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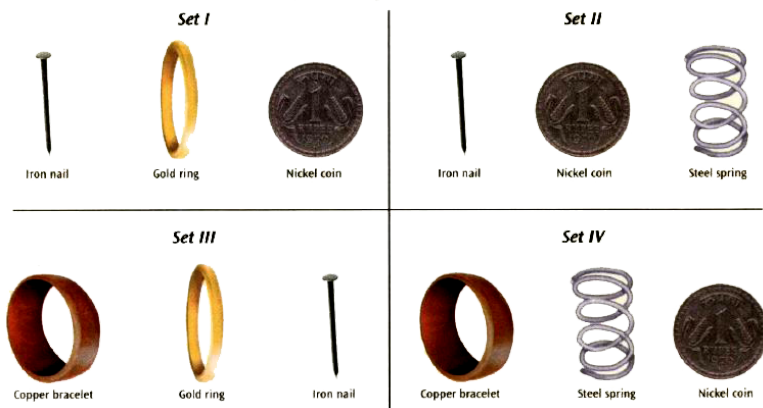
## Questions Observe The Figures And Answer The Questions

1. Four sets, each having three materials, are given here.

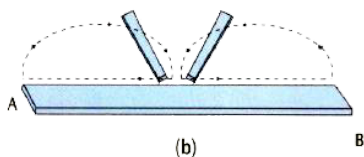
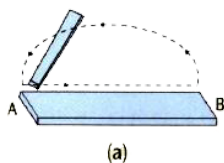
a. Identify the set that has all three magnetic materials.

b. Identify the sets that have only one non-magnetic material.

c. Identify the set that has only one magnetic material.



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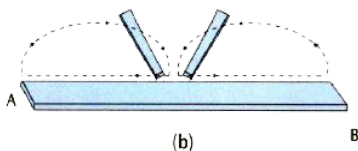
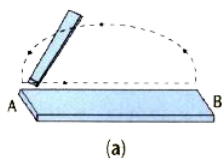


2.

The figures above show methods of making a magnet. Name the methods.



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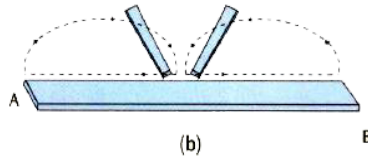
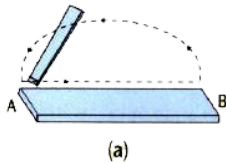


3.

In which direction should the magnetic material AB shown in Figure (a) be stroked by the bar magnet?



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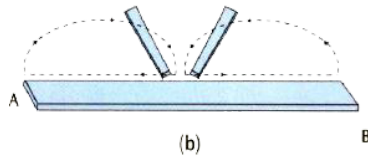
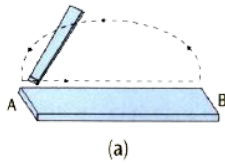


4.

What important factors should be kept in mind while using this method?



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5.

Will the method shown in Figure (b) work if bar magnets of unequal strengths are used?



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**Questions Write T For True And F For False  
Correct The False Statements**

1. The region around a magnet where its influence is felt is called magnetic field.



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2. Iron filings around a bar magnet align themselves in specific curves called magnetic lines of force.



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3. Magnetic lines of force may intersect each other.



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## Questions Choose The Correct Option

1. Which of the following retains magnetism for a long time?

A. Permanent magnet

B. Temporary magnet

C. Electromagnet

D. None of these

**Answer:**



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2. An electromagnet is made using

- A. another magnet
- B. single-touch method
- C. double-touch method
- D. electricity

**Answer:**



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### 3. Natural magnets

- A. are usually strong magnets
- B. are usually found in desired shapes
- C. are usually temporary magnets
- D. are usually weak magnets

**Answer:**



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4. Which of the following can demagnetize a magnet?

- A. Dropping from a height
- B. Using a magnetic keeper
- C. Keeping the opposite poles together
- D. Proper storage

**Answer:**



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5. If a magnet is heated to a high temperature, it

- A. loses its colour
- B. breaks down into pieces
- C. loses its taste
- D. loses its magnetism

**Answer:**



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6. .... are used to store magnets.

- A. Covers
- B. Lodestones
- C. Compass needles
- D. Magnetic keepers

**Answer:**



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1. Four materials that are attracted by magnets



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2. A naturally occurring material that has magnetic properties



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**3.** The instrument that has a magnetic needle and is used as a navigational tool by sailors



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**4.** Magnets that retain magnetism for a very long period of time



**Watch Video Solution**



5. The magnetic pole that points towards the geographical South



**Watch Video Solution**

6. Materials that are attracted by magnets



**Watch Video Solution**

7. The region in a magnet where magnetic force is concentrated



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8. The magnetism acquired by a magnetic material as long as it is in contact with a magnet



[Watch Video Solution](#)

9. A magnet whose magnetic property is due to the flow of an electric current through it



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10. Pieces of soft iron used for the storage of magnets



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## Exercises Section I Choose The Correct Option

1. Artificial magnets can be shaped like a

A. bar

B. horseshoe

C. ring

D. all of these

**Answer:**



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2. A freely suspended magnet always comes to rest in the geographical

A. East-West direction

B. South-West direction

C. North-South direction

D. East-North direction

**Answer:**



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**3. In a magnet,**

A. the north pole is stronger than the  
south pole

B. the south pole is stronger than the north pole

C. both poles are of the same strength

D. None of the above

**Answer:**



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4. When a magnet is dipped in a bowl of iron filings, the poles of the magnet attract

A. minimum filings

B. maximum filings

C. no filings

D. none of these

**Answer:**



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5. Which one of the following is a non-magnetic substance?

A. Iron

B. Copper

C. Cobalt

D. Nickel

**Answer:**



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**6. Magnets cannot be made using**

A. the single-touch method



B. the double-touch method

C. filtration

D. electricity

**Answer:**



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**7. Permanent magnet is made of**

A. rubber

B. wood

C. steel

D. glass

**Answer:**



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**8.** Which one of the following will not demagnetize a magnet?

A. Heating it

B. Hammering it

C. Dropping it from a height

D. Storing it using magnetic keepers

**Answer:**



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## Exercises Section I Write T For True And F For False Correct The False Statements

1. Magnets can exert a push or pull on objects without making contact with them.



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2. Magnetic poles always exist in pairs.



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3. The pole of a magnet, which points towards the geographical North when the magnet is suspended freely



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4. Like poles attract each other.



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5. Magnetic force can pass through non-magnetic materials.



**Watch Video Solution**

6. All metals are magnetic materials.



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7. Permanent magnets retain magnetism only for a short time.



**Watch Video Solution**

8. Magnetic keepers help to retain magnetism.



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**Exercises Section I Choose The Correct Option To Fill In The Blank**

1. Artificial magnets can be made in different ..... (shapes/colours).



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2. Magnetic force ..... (can/cannot) pass through non-magnetic materials.



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3. Draw magnetic field lines around a bar magnet



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4. For making a magnet using the double-touch method, ..... (one/two) bar magnet(s) is/are required.



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5. A piece of iron behaves like a magnet when it is kept very ..... (close/far) to a magnet.



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6. The magnetic properties of an induced magnetic material ..... (disappear/get stronger) as soon as the magnet is removed.



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7. In the single-touch method of making a magnet, ..... (one/two) bar magnet(s) is/are used.



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8. In the electrical method of making a magnet, a magnetic material is magnetized using a/an ..... (bar magnet/electric current).



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9. A/An ..... (plastic/iron nail) can be magnetized using an electric current.



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## Exercises Section II Give Reason For The Following

1. A freely suspended magnet aligns in the North-South direction.



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2. It is not possible to get a magnet with only one pole.



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3. Artificial magnets are preferred over natural magnets in most applications.



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4. Electromagnets are called temporary magnets.



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**Exercises Section II Explain The Following Terms  
With The Help Of Examples**

## 1. Poles of a magnet



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## 2. Electromagnets are made up of:



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**Exercises Section II Distinguish Between The Following**

1. The pole of a magnet, which points towards the geographical North when the magnet is suspended freely



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2. Natural and artificial magnets



**Watch Video Solution**

3. Temporary and permanent magnets



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#### 4. Steel and iron



**Watch Video Solution**

#### 5. Single-touch and double-touch methods of making a magnet



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6. State two differences between an electromagnet and a permanent magnet.



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## Exercises Section II Short Answer Questions

1. What are magnets and what do you mean by magnetism?



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2. What are magnetic poles?



**Watch Video Solution**

3. How will you show that magnetic force can pass through non-magnetic materials?



**Watch Video Solution**

4. How can a magnet be prepared by the induction method?



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5. Write any three uses of magnets.



**Watch Video Solution**

6. Write any three uses of electromagnets.



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**Exercises Section II Long Answer Questions**

1. Discuss any four properties of a magnet.



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2. With the help of a diagram, describe how you would make an electromagnet.



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3. Explain how magnets should be stored.



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4. What is the principle behind a compass needle?



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## Picture Based Questions



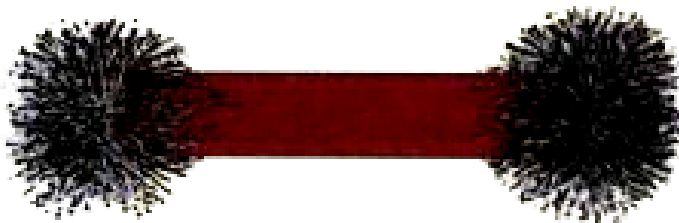
1.

Why are the iron filings clustered at the ends

of the magnet?



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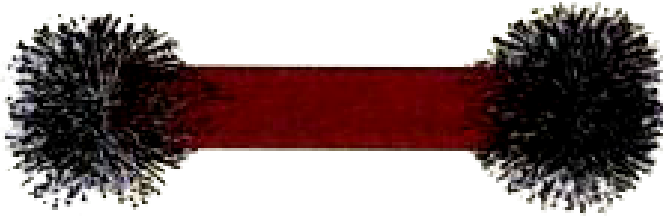


2.

What do you know about the discovery of magnets? Write a short note.



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3.

What type of force is magnetism?



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4.

The ends of a magnet are called 'poles'. What is the full name of each pole?



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Charcoal



Copper coil



Nickel coin



Iron nail



Paper



Gold ring



Stainless steel  
spoon



Steel spring



Aluminium foil



Wood

5.

How will a magnet help you to sort the materials given above into groups?



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Charcoal



Copper coil



Nickel coin



Iron nail



Paper



Gold ring



Stainless steel spoon



Steel spring



Aluminium foil



Wood

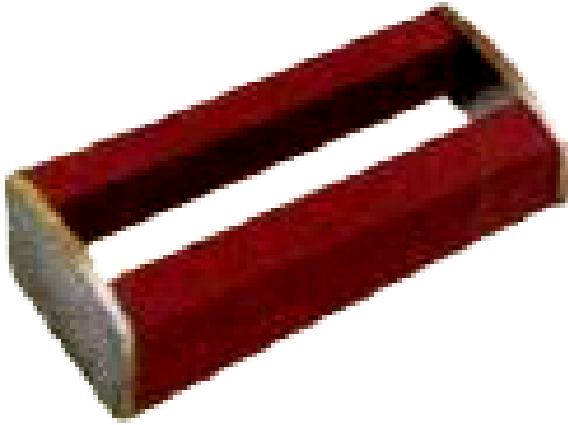
6.

List the groups, and give reason for placing each material under a particular group.



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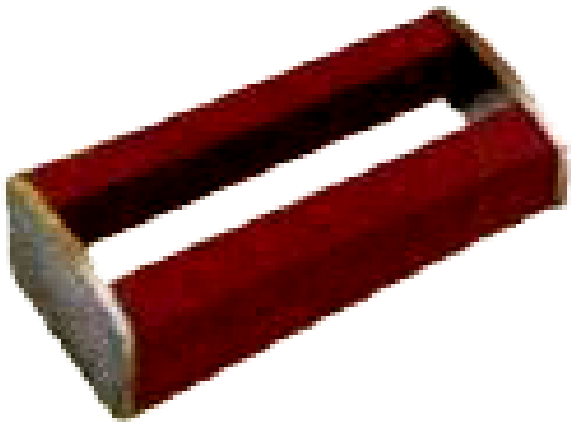


7.

How are the two bar magnets shown alongside stored?



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8.

Are keepers magnetic or non-magnetic materials?



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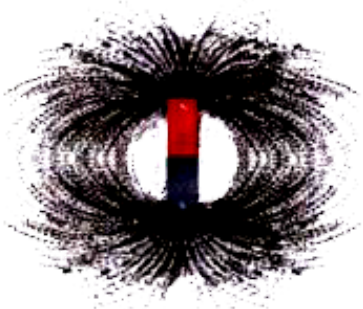


Fig. 1

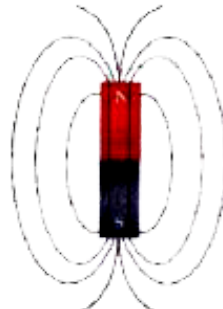


Fig. 2

9.

What is responsible for the pattern of the iron filings in Figure 1?



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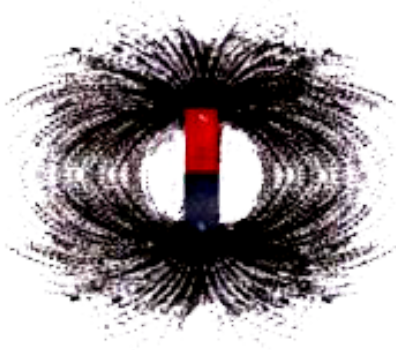


Fig. 1

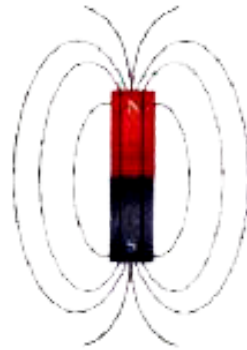


Fig. 2

10.

What are the curves in Figure 2 called?



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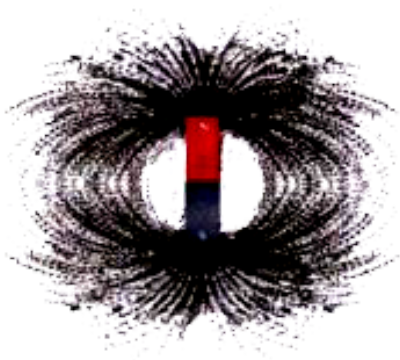


Fig. 1

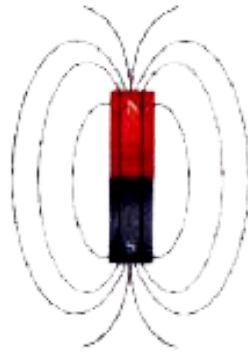


Fig. 2

11.

What would be the direction of these curves?



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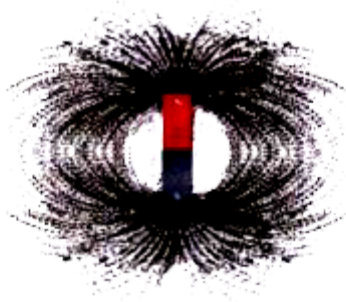


Fig. 1

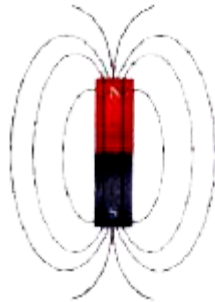


Fig. 2

12.

Why do the curved lines around the magnet never intersect each other?



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