

## Class-VI (CHAPTER-13) FUN WITH MAGNETS

### Questions

1. Fill in the blanks in the following:
  - (i) Artificial magnets are made in different shapes such as -----, -----and -----.
  - (ii) The materials which are attracted towards a magnet are called -----.
  - (iii) Paper is not a ----- material.
  - (iv) In olden days, sailors used to find direction by suspending a piece of -----.
  - (v) A magnet always has ----- poles.
2. State whether the following statement are true or false:
  - (i) A cylindrical magnet has only one pole. (T/F)
  - (ii) Artificial magnets were discovered in Greece. (T/F)
  - (iii) Similar poles of a magnet repel each other. (T/F)
  - (iv) Maximum iron filings stick in the middle of a bar magnet when it is brought near them. (T/F)
  - (v) Bar magnets always point towards North-South direction. (T/F)
  - (vi) A compass can be used to find East-West direction any place. (T/F)
  - (vii) Rubber is a magnetic material.
3. It is observed that a pencil sharpener gets attracted by both the poles of a magnet although its body is made of plastic. Name the material that 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.

| Column I | Column II  |
|----------|------------|
| N-N      | Attraction |
| N- ...   |            |
| S-N      |            |
| ...- S   | Repulsion  |

5. Write any two properties of a magnet.
6. Where are poles of a bar magnet located?
7. A bar magnet has no markings to indicate its poles. How would you find out near which end is its north pole located?
8. You are given an iron strip. How will you make it into a magnet?
9. How is a compass used to find directions?
10. A magnet was brought from different directions towards a toy boat that has been floating in water in a tub. Effect observed in each case is stated in Column I. possible reasons for the observed affects are mentioned in Column II. Match the statements given in Column I with those in Column II.

| Column I  | Column II  |
|---|--|
| (i) Boat gets attracted towards the magnet.   | (a) Boat is fitted with a magnet with North Pole towards its head.               |
| (ii) Boat is not affected by the magnet.  | (b) Boat is fitted with a magnet with a magnet with South Pole towards its head. |
| (iii) Boat moves towards the magnet if the north pole of the magnet is brought near its head. | (c) Boat has a small magnet fixed along its length.                              |
| (iv) Boat moves away from the magnet when north pole is brought near its head.                | (d) Boat is made of magnetic material.   |
| (v) Boat floats without changing its direction.   | (e) Boat is made of non-magnetic material.                                       |

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# NCERT Solutions

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### Answers

1. Fill in the blanks in the following:

- (i) Artificial magnets are made in different shapes such as bar **magnet, horse shoe** and **cylindrical**.
- (ii) The materials which are attracted towards a magnet are called **magnetic**.
- (iii) Paper is not a **magnetic** material.
- (iv) In olden days, sailors used to find direction by suspending a piece of **magnet**.
- (v) A magnet always has **two** poles.

2. True/False

- (i) F
- (ii) F
- (iii) T
- (iv) F
- (v) T
- (vi) T
- (vii) F.

3. Iron

4.

| Column I    | Column II         |
|-------------|-------------------|
| N-N         | <b>Repulsion</b>  |
| N-S         | Attraction        |
| S-N         | <b>Attraction</b> |
| <b>S- S</b> | Repulsion         |

5. Properties of magnet:

- (i) Attracts object made of iron, nickel or cobalt.
- (ii) Directs north-south direction.

6. On two ends of the bar magnet.

7. The bar magnet is hanged freely with the help of a thread. The end pointing to north is the north pole of the magnet.
  8. An iron strip is kept on table. One end of bar magnet is dragged over the iron strip from one end to the other. This process is repeated. The iron strip is converted to a magnet.
  9. The compass always shows North and South directions. Knowing North-South direction, one can always find out East and West directions also.
  10. Match the following-
    - (i) (d)
    - (ii) (e)
    - (iii) (b)
    - (iv) (a)
    - (v) (c)
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