



INDIAN SCHOOL AL WADI AL KABIR



CLASS: VI	DEPARTMENT: SCIENCE 2025-2026	DATE: 18/11/2025
TEXTBOOK- Q & A	CHAPTER: EXPLORING MAGNETS	NOTE: A4 FILE FORMAT
CLASS & SEC:	NAME OF THE STUDENT:	ROLL NO.

1. Fill in the blanks

- (i) Unlike poles of two magnets _____ each other, whereas like poles _____ each other.
- (ii) The materials that are attracted towards a magnet are called _____.
- (iii) The needle of a magnetic compass rests along the _____ direction.
- (iv) A magnet always has _____ poles.

[Hint: (i) attract, repel (ii) magnetic materials (iii) north-south (iv) two]

2. State whether the following statements are True (T) or False (F).

- (i) A magnet can be broken into pieces to obtain a single pole.
False.
- (ii) Similar poles of a magnet repel each other.
True
- (iii) Iron filings mostly stick in the middle of a bar magnet when it is brought near them.
False
- (iv) A freely suspended bar magnet always aligns with the north-south direction.
True

3. 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	-----
N – -----	Attraction
S – N	-----
----- – S	Repulsion

[Hint:

Column I	Column II
N – N	REPULSION
N – S	Attraction
S – N	ATTRACTION
S – S	Repulsion

4. Atharv performed an experiment in which he took a bar magnet and rolled it over a heap of steel U-clips



Bar magnet and a heap of steel U-clips

According to you, which of the options given in Table is likely to be his observation?

Table: Number of pins attracted by the magnet at its various positions

	Position A	Position B	Position C
(i)	10	2	10
(ii)	10	10	2
(iii)	2	10	10
(iv)	10	10	10

[Hint:

From the figure, it is clear that the ends of the magnet have more iron fillings attached to them. This is because the strength of a magnet lies more at the ends of the magnet. Hence option (i) is correct.]

5. Reshma bought three identical metal bars from the market. Out of these bars, two were magnets and one was just a piece of iron. How will she identify which two amongst the three could be magnets (without using any other material)?

[Hint: Magnets both attract and repel, whereas iron only attracts. Thus, repulsion helps to find which one is the bar and which one is the magnet.]

6. You are given a magnet which does not have the poles marked. How can you find its poles with the help of another magnet which has its poles marked?

[Hint: To find the poles of an unmarked magnet, bring one end of the marked magnet near one end of the unmarked magnet. If they attract, the unmarked magnet's end is the opposite pole (i.e., if the marked North pole attracts, then the unmarked end is the South pole). If they repel, then the poles are similar.]

7. A bar magnet has no markings to indicate its poles. How would you find out near which end its North Pole is located without using another?

[Hint: When a bar magnet is suspended freely, it always rests in north-south directions. The end pointing toward the north is called the north-seeking end or the north-pole, and the end pointing towards the south is called south-seeking end or the south pole of the magnet.]

8. If the earth is itself a magnet, can you guess the poles of the earth's magnet by looking at the direction of the magnetic compass?

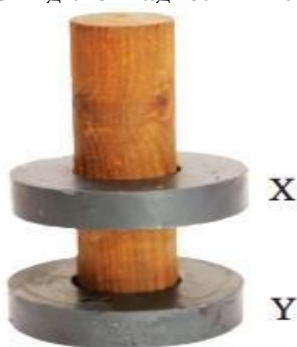
[Hint: Yes, we can guess the poles of Earth's magnet by looking at the direction of the magnetic compass. The compass needle's north pole points towards the Earth's geographic north, indicating that the Earth's magnetic south pole is near the geographic north. Thus, the Earth's magnetic north pole is near the geographic south.]

9. While a mechanic was repairing a gadget using a screwdriver, the steel screws kept falling down. Suggest a way to solve the problem of the mechanic on the basis of what you 'have learnt in this chapter.

[Hint: The mechanic needs to magnetise his screwdriver, which will not just lift the screw but hold it in place while he works.

To magnetise a screwdriver, he needs a magnet. He is advised to place the screwdriver on a wooden table. Then keep one end (pole) of the magnet at one end of the metallic part of the screwdriver. Move the magnet along the length of the metallic part of the screwdriver. Lift it and bring the same pole of the magnet to the same end of the screwdriver he began, and repeat, moving it over the length of the screwdriver. On repeating this process about 30 times, the screwdriver will get magnetised.]

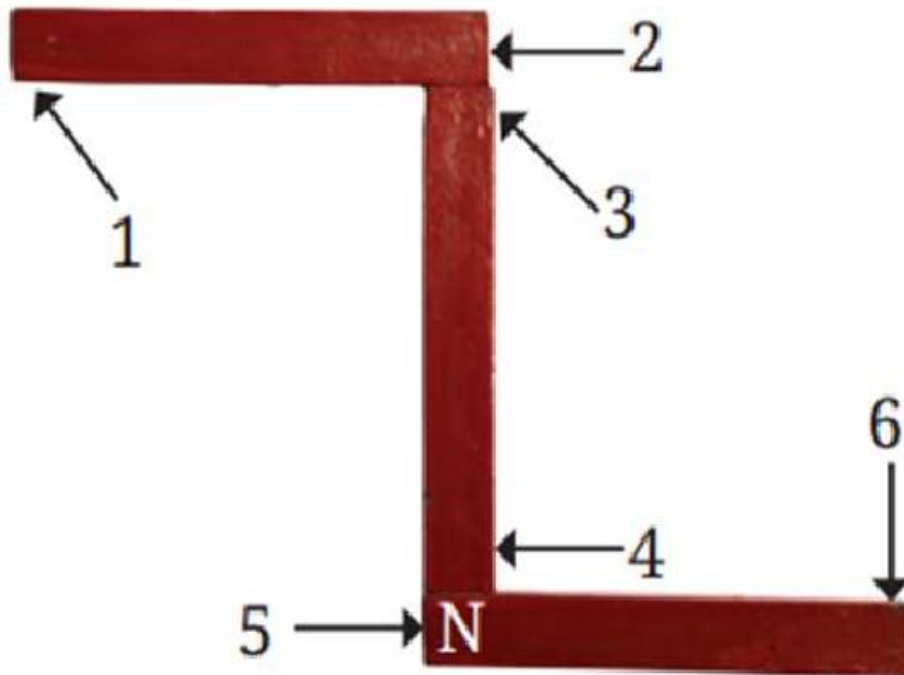
10. Two ring magnets X and Y are arranged as shown in Fig. (below). It is observed that the magnet X does not move down further. What could be the possible reason? Suggest a way to bring the magnet X in contact with magnet Y, without pushing either of the magnets.



Two ring magnets

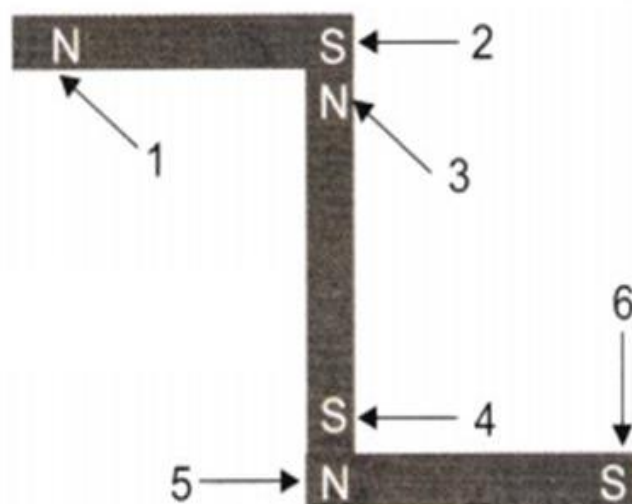
[Hint: Magnet X must be floating because the like poles are facing each other (like poles repel each other). If we change the direction of the magnet X by flipping one of the magnets, the unlike poles will face each other and the magnets will come closer.]

11. Three magnets are arranged on a table in the form of the shape shown in Fig. (below). What is the polarity, (here refers to the property of having two opposite ends or poles) N or S, at the ends 1, 2, 3, 4, and 6 of the magnets? The polarity of one end (5) is given to you.



Three bar magnets

Hint:



Point	Polarity
1	N
2	S
3	N
4	S
6	S

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