Brain International School

Vikas Puri, New Delhi

ASSIGNMENT NO. 3

SUBJECT: SCIENCE CLASS-VI JULY'2025

Chapter -4: Exploring Magnets

1**. Choose the correct option:**

i. A magnet which retains its magnetic properties for a long period is called

a) Magnetic substance b) non- magnetic substance

c) artificial magnets d) permanent magnet

ii. The substances that get attracted towards a magnet are called substances

a) magnetic b) non magnetic

c) Transparent d) Luminous

2. In each of the following questions, two statements are given one labeled Assertion (A) and the other labelled Reason (R). Select the correct answer to these questions from the codes (a), (b), (c) and (d) as given below:

a) Both A and R are true, and R is correct explanation of the assertion.

b) Both A and R are true, but R is not the correct explanation of the assertion.

c) A is true, but R is false.

d) Both assertion and reason are false.

(i) **Assertion**: Every magnet is bipolar, which means it has two poles at the ends.

Reason: The North and South poles are the two poles of a magnet.

(ii) **Assertion**: The magnetic material can be converted into a magnet by rubbing on a magnet.

Reason: This creates an influence where the particles inside the material align themselves like the poles of a magnet.

3. Answer the following question.

1. Why does a freely suspended magnet always rest in north-south direction?
2. What happens when a pole of a bar magnet says its north-pole is marked with a chalk and suspended freely? What do you observe on rotating the bar magnet?
3. How can you show that unlike poles attract each other while like poles repel each other?
4. What are the precautions need to be taken while handling a magnet?
5. Do magnetic poles exist separately like charges? Explain

4. Answer the following case study-based questions.

Anvi was helping her grandmother stitch clothes. Suddenly, the sewing needle fell onto the carpet and was difficult to find. Her grandmother gave her a magnet and asked her to move it over the carpet. Within a few seconds, the needle got stuck to the magnet and was found easily. Later, Anvi became curious and started exploring more about magnets. She tried the magnet on different materials such as plastic, wood, paper clips, iron nails, and aluminum foil. She observed that only some materials were attracted by the magnet.

1. Why was the magnet able to pick up the needle but not plastic or wood?
2. Which materials from Anvi's experiment were magnetic and which were non-magnetic?
3. List two uses of magnets in daily life.
4. What would happen if Anvi brought two bar magnets close together with the same poles facing each other?
5. Why should we not drop or hammer a magnet repeatedly? What may happen to it?

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Chapter-5 Measurement of length and motion

1. **Choose the correct option:**

i. Which of the following is not considered as an appropriate unit of measurement?

a) Kilometre b) cubit

c) centimetre d) miles

ii. Which of the following statement(s) is/are correct?

a) Revolution of the earth around the sun is an oscillatory motion

b) A freely falling stone possesses periodic motion.

\ c) A simple pendulum possesses circular motion

d) Whirling a stone tied to a thread involves circular motion.

2. **In each of the following questions, two statements are given one labelled. Assertion (A) and the other labelled Reason (R). Select the correct answer to these questions the codes (a), (b), (c) and (d) as given below:**

a) Both A and R are true, and R is correct explanation of the assertion.

b) Both A and R are true, but R is not the correct explanation of the assertion

c) A is true, but R is false

d) Both assertion and reason are false.

(i) **Assertion**: The wheels of the bicycle will exhibit only rectilinear motion

Reason: The wheel will move forward and its points around the rim will execute the circular motion.

(ii) **Assertion**: When we travel in a vehicle, co-passengers appear to be stationary.

Reason: None of us are moving in a vehicle.

3. Answer the following question.

1. How does the position of the eye affect the accuracy of measuring with a scale?
2. Why are flexible measuring tapes preferred for measuring the girth of objects?
3. Why is it important to use standard units of measurement in everyday life?
4. What type of motion do the following objects have?
   (a) The galloping of a horse
   (b) The needle of a sewing machine
   (c) The bike move on a straight road
   (d) The blades of an electric fan
   (e) Truck moving in a well.
   (f) Wheels of moving car.
5. Describe the process of measuring an object using a scale with broken ends.

4. Answer the following case study-based questions

Rohan and Meera were working on a science project at home. They had to measure the lengths of different objects and record their types of motion. While measuring a pencil using a 15 cm plastic scale, they realized that the first 2 cm of the scale was broken. Meera said, "Let's start measuring from the 2 cm mark instead of zero and subtract it later." They also observed that: The pencil was 7 cm long when measured from the 2 cm mark to the 9 cm mark. They noticed that the hands of a clock show circular motion, while a toy car moving straight on the floor shows rectilinear motion.

1. What is the actual length of the pencil based on their measurement?
2. What would happen if they forgot to subtract the 2 cm while measuring?
3. Why is it important to place the scale properly while measuring the length of an object?