

Magnetism

1. A bar magnet is rubbed on a bar of steel along its length 20 times. The bar of steel gets magnetized due to the process of:
 - (a) induction
 - (b) conduction
 - (c) friction
 - (d) none of these
2. The magnetic strength of a bar magnet is:
 - (a) maximum at its centre
 - (b) same along the magnet
 - (c) maximum near its ends
 - (d) none of these
3. The surest test of magnet is :
 - (a) repulsion
 - (b) attraction
 - (c) induction
 - (d) none of these
4. Nickel is a:
 - (a) ferromagnetic substance
 - (b) paramagnetic substance
 - (c) diamagnetic substance
 - (d) none of these
5. The substance which form a strong temporary magnet is
 - (a) steel
 - (b) platinum
 - (c) soft iron
 - (d) manganese
6. The place around a magnet where its influence can be detected is called
 - (a) magnetic lines of force
 - (b) magnetic pole
 - (c) magnetic field
 - (d) magnetic space
7. What are magnetic and non-magnetic substances? Give at least two examples of each.
8. Fill the blank spaces in the table given below:

Nature of bar	Action on compass needle	
	North Pole	South Pole
Non-magnetic	No action
-----	Attracted	Attracted
North pole of a bar magnet
-----	attracted	repelled

1. How do you account for the following facts ?
 - (a) Iron becomes magnetised when placed in a coil carrying direct current.
 - (b) Bar magnets lose their magnetism when heated strongly.
 - (c) Steel makes better permanent magnet than soft iron.
 - (d) Soft iron keepers help to prevent the magnets from losing their magnetic properties.
2. State briefly
 - (a) the molecular theory of magnetism,
 - (b) the modern views on magnetism.
3. Describe various methods of magnetizing a piece of iron.
4. What is magnetic induction? Explain it giving a suitable experiment
5. Repulsion is a surer test of magnetic condition of a body than attraction. Explain.
6. Draw diagrams showing the arrangements of the lines of force for:
 - (a) a single magnet.
 - (b) two magnets in line with unlike poles facing one another
 - (c) a piece of soft iron laid in line with magnetic field.
7. Give short account of the earth's magnetic field.
8. Give the various methods for demagnetising a magnet.
9. Describe few simple experiments to support the statement that magnetism is a property of the molecules of a magnet.
10. Explain, why steel is used in preference to soft iron for making permanent magnets while soft iron is used in preference to steel for making electromagnets.