Chapter 13. Fun With Magnets

Very Short Q&A:

Q1: What is magnet?

Ans: The substance having property of attracting iron is known as magnet.

Q2: Magnetite is a natural magnet. (TRUE/FALSE)

Ans: True

Q3: Artificial magnets are made in different shapes. Give some examples.

Ans: Bar magnet, horse shoe magnet, cylindrical magnet etc.

Q4: Magnetite contains _____.

Ans: Iron

Q5: What are magnetic materials?

Ans: The materials which get attracted towards a magnet are magnetic materials.

Q6: What are non-magnetic materials?

Ans: Materials which are not attracted towards a magnet are non-magnetic materials.

Q7: Give two examples each of magnetic and non magnetic material.

Ans: Example of magnetic material are iron, nickel etc. Examples of non magnetic material are plastic, rubber etc.

Q8: Plastic is a _____material.(magnetic/non-magnetic)

Ans: Non magnetic

Q9: A magnet has _____poles.

Ans: 2.

Q10: Magnet was first discovered in Greece. Is the statement true?

Ans: Yes

Q11: If we break a bar magnet into three parts, _____poles will be formed.

Ans: Six

Q12: The materials which get attracted towards a magnet like iron are called _____.

Ans: Magnetic

Q13: What are the two poles of magnet?

Ans: North and South Pole.

Q14: The materials which are not attracted by magnet are called _____.

Ans: Non-magnetic

Q15: Cobalt is a _____material.(Magnetic/non-magnetic)

Ans: Magnetic

Q16: A cylindrical magnet has only one pole.(TRUE/FALSE)

Ans: False

Q17: Nickel is a _____material.(magnetic/non-magnetic)

Ans: Magnetic

Q18: Can magnet be used for finding directions?

Ans: Yes.

Q19: Horse shoe magnet is a _____magnet.

Ans: Artificial

Q20: Same pole of magnet _____each other.

Ans: Repel

Q21: All magnets have two poles, whatever their shape may be. Is the statement true?

Ans: Yes

Q22: Bar magnet is a _____magnet.

Ans: Artificial.

Q23: Freely suspended magnet always comes to rest in a particular direction. Which is that direction?

Ans: North-south direction.

Q24: What is magnetite?

Ans: The natural magnet is called magnetite.

Q25: What is the use of magnetic compass?

Ans: The magnetic compass is used to know about the directions as its needle points to north-south direction.

Q26: If we break a magnet, all its pieces have two poles each.(TRUE/FALSE)

Ans: True

Q27: Poles of bar magnet are located near _____.

Ans: Its two ends

Q28: Where will the maximum iron fillings stick on a bar magnet when it is brought near them?

Ans: At the ends of bar magnet.

Q29: Needle of magnetic compass indicates _____direction.

Ans: North-south

Q30: Write any one property of magnet.

Ans: Same pole of magnet repel each other.

Q31: An electromagnet is used in the crane.(TRUE/FALSE)

Ans: True

Q32: Opposite poles of a magnet _____ each other.

Ans: Attract

Q33: Magnet was discovered in _____.

Ans: Greece

Short Q&A:

Q1: What is the difference between magnetic and non-magnetic material? Give examples.

Ans: The materials which get attracted towards a magnet are magnetic materials. For example-iron, cobalt etc. Materials which are not attracted towards a magnet are non-magnetic materials. For example-plastic, glass etc.

Q2: Write any two uses of magnet.

Ans: Magnetic compass can be used to know about the directions. Magnet can be used to separate magnetic materials such as iron from the non-magnetic ones.

Q3: What is a magnetic compass?

Ans: Magnetic compass is a small box with glass cover. It consists of a magnetised needle, which rotates freely and indicates north south direction when comes to rest.

Q4: Where are the poles of a bar magnet located?

Ans: The two ends of the bar magnet represents its two poles.

Q5: Write any three properties of a magnet?

Ans:

a) Magnet has two poles north and South Pole.
b) Same poles of two magnets repel each other.
c) Opposite poles of two magnets attract each other.

Q6: What is the principle on which magnetic compass works?

Ans: When a bar magnet moves or rotates freely, it comes to rest in north south direction. This is the principle on which magnetic compass works.

Q7: Write two cautions to keep a magnet.

Ans: Bar magnets should be kept in pairs with their unlike poles on the same side. They must be separated by piece of wood. For horse shoe magnet one should keep a piece of iron across the poles.

Q8: What is an electromagnet?

Ans: A soft metal core made into a magnet by the passage of electric current through a coil surrounding it.

Q9: How should we keep a horse shoe magnet?

Ans: For horse shoe magnet one should keep a piece of iron across the poles.

Q10: How can we safely keep bar magnet so that they do not lose their property?

Ans: Refer answer 7.

Q11: How magnets lose their property?

Ans: Magnets lose their property if they are heated, hammered, dropped from some height or not stored properly.

Q12: How can we find out near which end is North Pole located in a bar magnet?

Ans: Hang up the magnet by a cotton thread so that it hangs freely. When it comes to rest, we note that magnet is lying in north-south direction.

Q13: Match the following:

A		B	
1.	N-N	a.	Attracts
2.	MAGNETIC COMPASS	b.	Repel
		c.	To find direction
3.	N-S	d.	Attracts
4.	S-N		

Ans:

A		B	
1.	N-N	a.	Repel
2.	MAGNETIC COMPASS	b.	To find direction
		c.	Attracts
3.	N-S	d.	Attracts
4.	S-N		

Q14: If a bar magnet is cut length wise into two parts, how many number of poles will form?

Ans: Four poles will be formed. Two north and two south poles.

Q15: Classify the following as magnetic and non magnetic material:
Iron, plastic, rubber, glass, mirror, cobalt

Ans:

Magnetic material-iron, cobalt
Non-magnetic material-plastic, rubber, glass, mirror

Long Q&A:

Q1: How can you make an iron strip into a magnet?

Ans: Take a bar magnet and place its pole near one edge of the iron bar. Without lifting the bar magnet, move it along the length of iron bar. Move the magnet again along the iron bar. Repeat it 30-40 times. Check whether it has become a magnet. If not continue the process for some more time.

Q2: How was magnet discovered?

Ans: It is said that magnet was discovered in Greece. A shepherd name Magnes used to take a stick with him to control his heard. One day he was surprised to see that he had to pull hard to free his stick from a rock on the mountainside. The rock was natural magnet and it attracted iron tip of shepherd’s stick.