DAILY PRACTICE PROBLEM

Fun with Magnets DPP-01

Multiple choice questions

1. A magnet is kept quite close to a gold ring but the ring did not get attracted towards the magnet, why?

(1) Gold is magnetic material (2) Gold is non magnetic material

(3) Magnet is weaker (4) Magnet is stronger

2. Identify from given option a natural magnet.

(1) A bar magnet (2) A magnetic compass

(3) magnetite (4) Horse shoe magnet

3. When you bring two magnets close together they will

(1) repel (2) attract (3) may attract or repel (4) no effect

4. A magnet attracts

(1) Graphite (2) Iron nail (3) plastic (4) Aluminium

True or False

5. Lodestone is composed of oxides of iron.

6. A bar magnet is an example of natural magnet.

Fill in the blanks

7. Name of first magnet is _____.

8. _____ discovered magnet accidentally.

Subjective questions

9. What is a magnet?

10. what are artificial magnets? gives its example.

SOLUTIONS DPP-01

1. **Option (2)**

A magnet is kept quite close to a gold ring but the ring did not get attracted towards the magnet, because gold is non-magnetic material.

2. **Option (2)**

Magnetite is a natural magnet also called as lodestone.

3. **Option (3)**

When we bring two magnets close together, they may attract or repel based on the poles.

4. **Option (2)**

A magnet attracts Iron nail as it is magnetic material.

5. **True**

Lodestone is composed of oxides of iron.

6. **False**

A bar magnet is an example of artificial magnet.

7. Name of first magnet is **Lodestone**

8. **Magnes** discovered magnet accidentally.

9. The substances having the property of attracting magnetic materials like iron are now known as Magnets.

10. Artificial magnets are man made magnets in different shapes and sizes, now a day pieces of iron and material of suitable shapes and sizes are made as magnets. Such magnets are called artificial magnets.

A bar magnets, a magnetic compass, a U shaped magnets and a cylindrical magnets.

DAILY PRACTICE PROBLEM

Fun with Magnets DPP-02

Multiple choice questions

1. If you put a magnet in a heap of iron filings, which part of magnet attracts them the least ?
(1) Same throughout (2) No attraction (3) Both ends (4) Centre

2. Magnetic poles are located in the bar magnet
(1) at the centre (2) at the ends (3) inside (4) in the middle

3. Two poles of a magnets are
(1) east and west (2) north and south (3) north and east (4) south and west

Complete the table

4. Identify the object (Magnetic or Nonmagnetic)

	Objects	Magnetic or Non-Magnetic
(i)	Steel Spoon 	
(ii)	Steel Ruler 	
(iii)	Eraser 	
(iv)	Tea Cup 	
(v)	Nickel Coin 	
(vi)	Copper Bottle 	
(vii)	Iron Bolt 	
(viii)	Wood 	
(ix)	Gold Ring 	
(X)	Bronze statue 	

True or False

5. Magnet is an object with magnetic force.

6. Magnetite doesn't show magnetic properties.

Fill in the blanks

7. The region of strongest magnetism are near the ends of a bar magnet. These ends are called _____.

8. Magnet has _____ poles.

Subjective questions

9. What are magnetic and nonmagnetic materials?

10. What are magnetic poles and where are they located in a magnet?

SOLUTIONS DPP-02

1. Option (4)

if you put a magnet in a heap of iron filings, both ends of the magnet attracts the maximum amount of iron filings as near to poles magnetic field strength is maximum at the centre part strength will be minimum so at centre of the magnet least amount of iron filing attracted.

2. Option (2)

Magnetic poles are in the bar magnet at the end points.

3. Option (2)

Two poles of a magnets are north and south. At the poles magnetic strength is maximum.

4.

	Objects	Magnetic or Non-Magnetic
(i)	Steel Spoon 	Magnetic
(ii)	Steel Ruller 	Magnetic
(iii)	Eraser 	Non-magnetic
(iv)	Tea Cup 	Non-magnetic
(v)	Nickel Coin 	Magnetic
(vi)	Copper Bottle 	Non-magnetic
(vii)	Iron Bolt 	Magnetic
(viii)	Wood 	Non-magnetic
(ix)	Gold Ring 	Non-magnetic
(X)	Bronze statue 	Non-magnetic

5. **True**

Magnet is a substance that have a region where other magnet or magnetic material affected by a force called magnetic force.

6. **False**

Magnetite is a natural magnet which get attracted towards a magnet.

7. The region of strongest magnetism are near the ends of a bar magnet. These ends are called **Magnetic poles**.

8. Magnet has **Two** poles.

9. The materials which get attracted towards a magnet are called magnetic material such as iron, nickel and cobalt and the materials which do not get attracted towards a magnet are called non magnetic materials such as silver, wood, plastics and rubber.

10. The parts of a magnet where the magnetic force is strongest are called the magnetic poles. These are north pole and south pole located at the end of the magnet.

DAILY PRACTICE PROBLEM

Fun with Magnets DPP-03

Multiple choice questions

1. A freely suspended magnet align sin a north-south direction

(1) Attractive property

(2) directive property

(3) inductive nature

(4) None of these

2. Which of the following is not true about permanent magnets

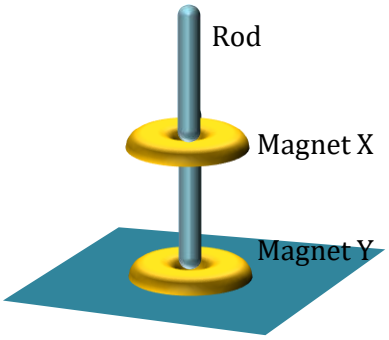
(1) they have two poles

(2) they are surrounded by magnetic fields

(3) they have magnetic force

(4) they can be turned on and off

3. Two ring magnets, X and Y are connected through a rod as shown below. Magnet X floats above magnet Y because



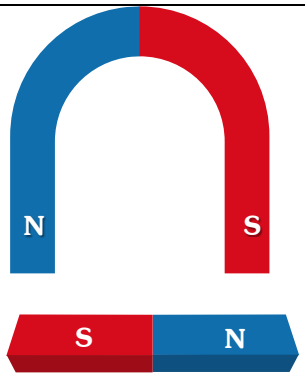
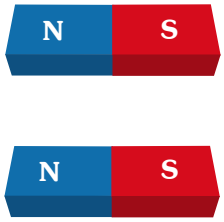
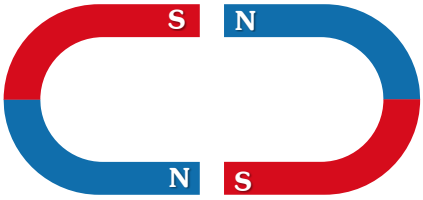
(1) magnet X is lighter than magnet Y.

(2) magnet X is lighter than magnet Y.

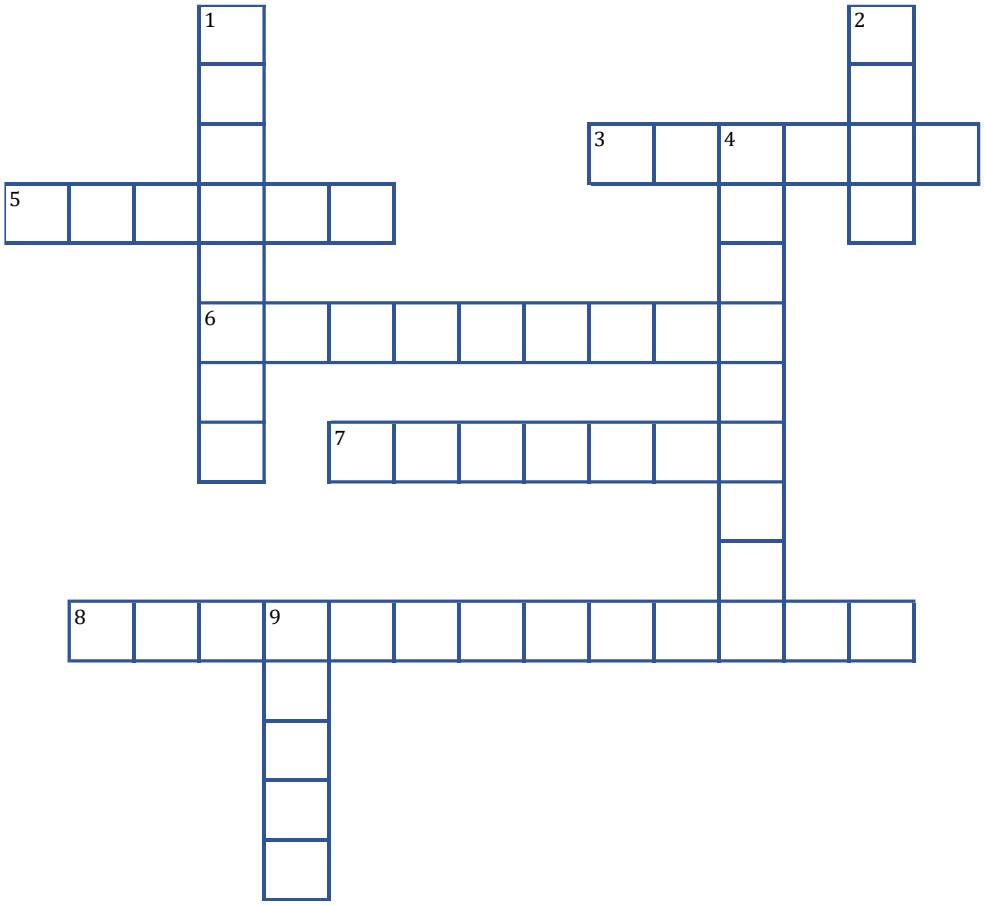
(3) the like poles of both magnets are facing each other.

(4) The unlike poles of both magnets are facing each other.

4.

(1)		
(2)		
(3)		
(4)		
(5)		

5. Crossword



ACROSS

3. The attraction power of a magnet is minimum at

5. A magnet always have _____.

6. The property of a material to be magnified when put near a magnet.

7. A magnet always _____ iron.

8. A region of influence surrounding a magnet where magnet or magnetic materials affected by a magnetic force.

DOWN

1. In magnetic induction Pole induced in a magnetic material is always _____ in nature of the facing pole

2. The region in a magnet where magnetic force is maximum called _____ .

4. A magnet always aligns its self in north south direction due to its _____ property.

9. A compass needle always points in _____ direction.

6. Match the column

Column-I		Column-II	
(A)	North seeking pole	(p)	Pole of a freely suspended magnet which points to south.
(B)	South seeing pole	(q)	cannot exists independently
(C)	Cobalt bar placed near a bar magnet acquired magnetization	(r)	Pole of a freely suspended magnet which points to north.
(D)	Magnetic poles	(s)	Magnetic induction

Fill in the blanks

7. When certain substances like iron is placed near a bar magnet, it acquire magnetization called _____.

8. Freely suspended magnet stays in _____ direction.

9. The attracting power of magnet is minimum at _____.

Subjective question

10. Why does a freely suspended magnet always rest in north-south direction?

SOLUTIONS DPP-03

1. Option (2)

A freely suspended magnet align sin a north south direction this is directive property.

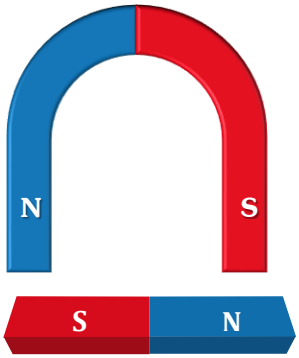
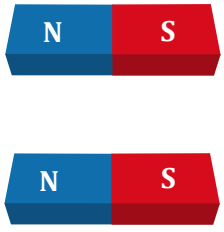
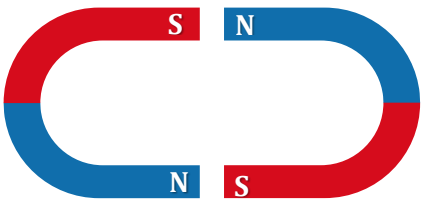
2. Option (4)

permanent magnets have two poles and are surrounded by magnetic fields also they have magnetic force.

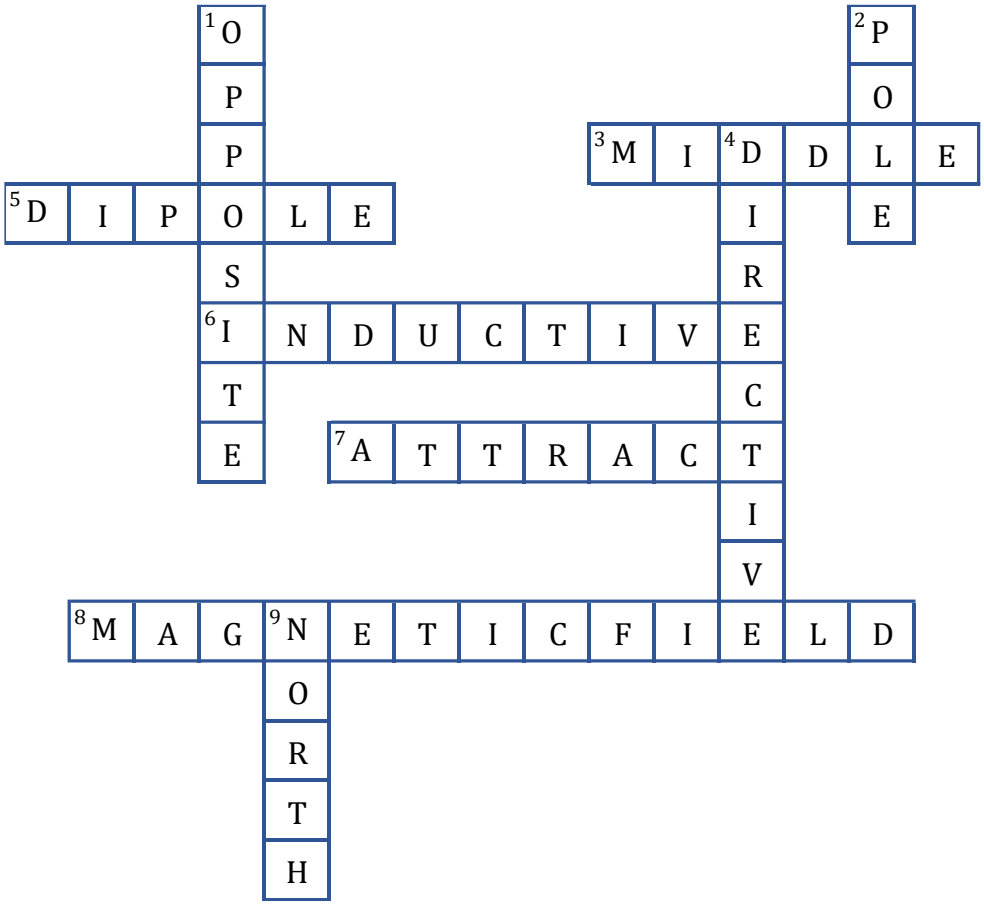
3. Option (4)

Magnet X floats above magnet Y because unlike poles of both magnets are facing each other.

4.

(1)		Repel
(2)		Attract
(3)		Attract
(4)		Repel
(5)		Attract

5. **Crossword**



6. (A → r); (B → p); (C → s); (D → q)

7. Magnetic Induction

8. North-South

9. Middle

10. A freely suspended magnet always rests in the north-south direction because the magnetic south pole of the earth lies in the geographic north direction and the magnetic north pole of the earth lies in the geographical south direction. As unlike poles attract and like poles repel, a magnet aligns itself in N-S direction.

DAILY PRACTICE PROBLEM

Fun with Magnets DPP-04

Multiple choice questions

1. The shape of earth's magnetic field similar to

(1) that of a horseshoe magnet (2) that of a bar magnet

(3) that of a ball ended magnet (4) none of these

2. Which of the following would not change the strength of an electromagnet?

(1) Increasing the amount of current. (2) changing the current direction

(3) Inserting an iron core inside the coil (4) Increasing the number of loops

3. An electromagnet is used in

(1) Electric bell (2) Electric oven (3) electric iron (4) All of these

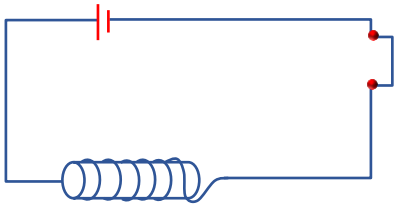
Short answer type questions

4. Write any one most suitable material to be used as the core of an electromagnet.

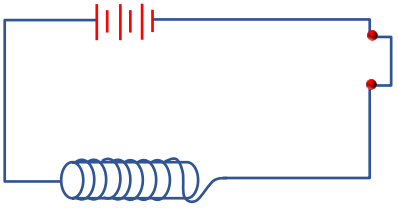
5. (a) How can the strength of an electromagnet be increased?

(b) Arrange the following electromagnetics on the basis of their strength from weakest to strongest.

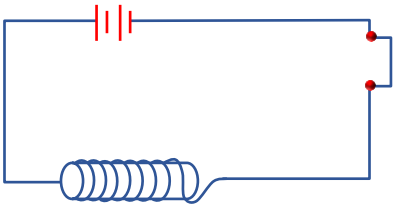
(1)



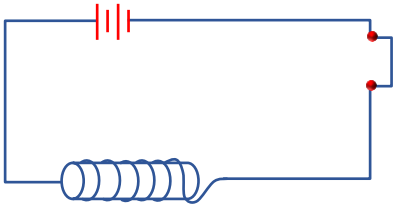
(2)



(3)

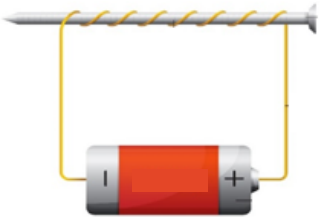


(4)



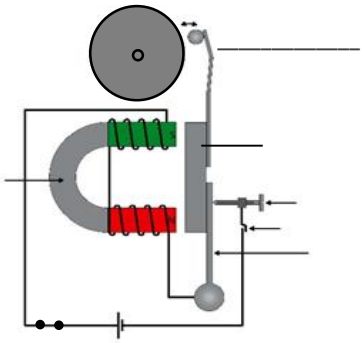
Long answer type questions

6. What is an electromagnet? Also labelling the following diagram.



7. Write any four uses of electromagnet.

8. Label the following diagram.



9. Why bar magnets stored in pairs between the wood?

10. What are the advantages of an electromagnet over permanent magnet?

SOLUTIONS DPP-04

1. **Option (2)**

The shape of earth's magnetic field similar to that of a bar magnet.

2. **Option (4)**

By changing the current direction strength of an electromagnet would not change but strength of an electromagnet would change by Increasing the amount of current Increasing the number of loops and inserting an iron core inside the coil.

3. **Option (1)**

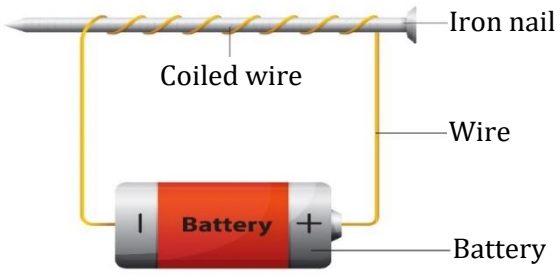
An electromagnet is used in Electric bell, when an electric current flows through the coils, the electromagnet creates a magnetic field which pulls the armature towards it, causing the hammer to strike the bell.

4. Iron is most suitable material to be used as the core of electromagnet.

5. (a) The strength of magnetic field of an electromagnet can be increase easily by increasing the current or the number of turns in the coil.

(b) 1 < 4 < 3 < 2

6. An **electromagnet** is a coil of wire wrapped around an iron core. When an electric current flows through the coil, it creates a magnetic field. This produces temporary magnetism in the iron core. Thus, magnetism of current carrying coil and iron core together produces a strong magnetic field. When the current stops, the iron core is no longer magnetic and there is no magnetic field due to the coil.



7. Use of magnets in electromagnets.

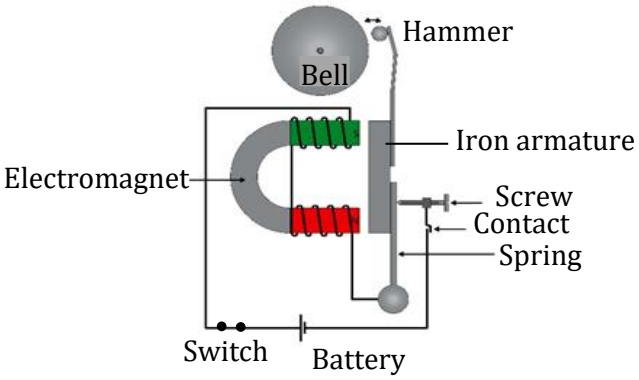
(1) They are used in radio and stereo speakers.

(2) They are used on video and audio cassette tapes.

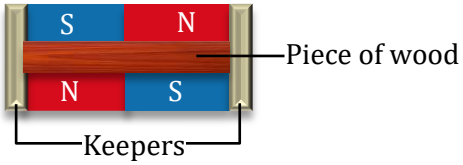
(3) They are used on the hard discs and floppies for computers.

(4) In medicine, they are used in Magnetic Resonance Imaging (MRI) scanners to examine the inner body parts of human beings.

8.



9. Bar magnet should be stored in pairs always with their unlike poles on the same side separated by a piece of non magnetic material like wood by a support and covered by magnetic materials, like soft iron at the edges/poles in the following manner.



(a) Bar magnets

10.

1. An electromagnet can produce a strong magnetic field as compared to a permanent magnet.
2. The strength of magnetic field of an electromagnet can be changed easily by changing the current or the number of turns in the coil.
3. The polarity (north pole or south pole) of the electromagnet can be changed by reversing the direction of the current
4. An electromagnet can be easily magnetised or demagnetised as per the requirement.

DAILY PRACTICE PROBLEM

Fun with Magnets DPP-05

Multiple choice questions

1. Self demagnetisation is -

(1) magnets tends to become weaker after some time if their poles are left free.

(2) magnet tends to become stronger after some time if their poles are left free.

(3) it behaves as electromagnet.

(4) None of the above

2. In an electric bell, a small hammer is attached to the iron strip called

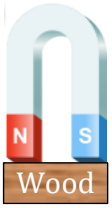
(1) gong

(2) electromagnet

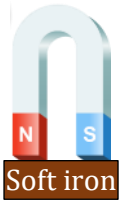
(3) Armature

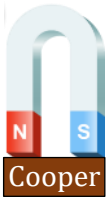
(4) spring

3. Which of the following is the best way to keep horse shoe magnet?

(1) 

(2) 

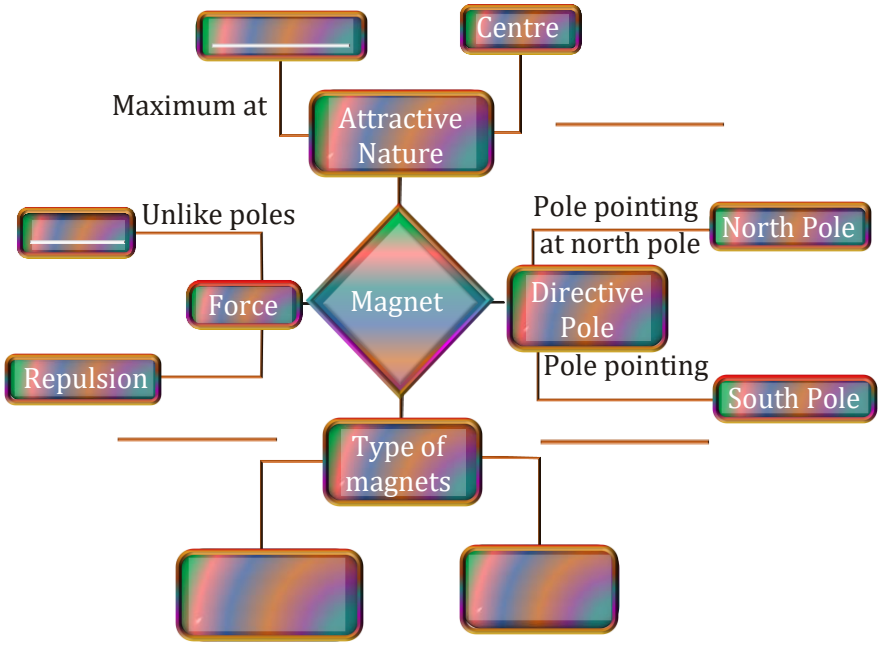
(3) 

(4) 

4. **Match the column**

Column-I		Column-II	
(A)	North seeking pole	(p)	Pole of a freely suspended magnet which points to south.
(B)	South seeing pole	(q)	cannot exists independently
(C)	Cobalt bar placed near a bar magnet acquired magnetization	(r)	Pole of a freely suspended magnet which points to north.
(D)	Magnetic poles	(s)	Magnetic induction

5. Concept Map



Fill in the blanks

6. Always keep magnets _____ from mobile, television and CD's.

7. A compass needle a thin _____.

8. One end of magnetic needle in the magnetic compass is coloured red. This end of the needle always points _____.

Short answer type question

9. What are the safety measures for magnets.

Long answer type question

10. What are the magnetic keepers. How bar magnets and horse shoe magnets are stored.

SOLUTIONS DPP-05

1. **Option (1)**

Magnets become weak if they are not stored properly. Magnets tend to become weaker after some time if their poles are left free. This is called self-demagnetisation**.**

2. **Option (3)**

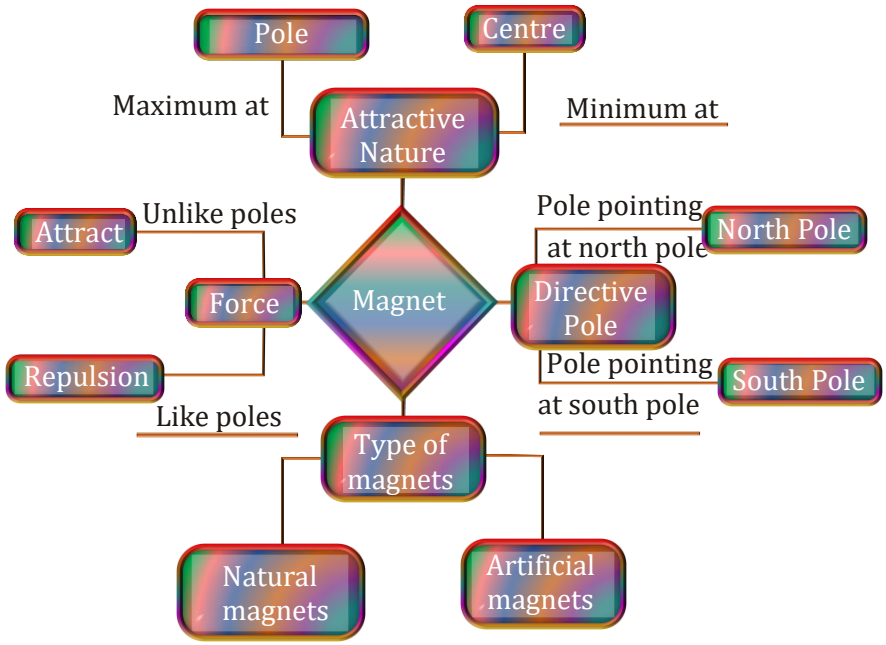
In an electric bell, a small hammer is attached to the iron strip called Armature.

3. **Option (3)**

A magnetic keeper is a piece of soft iron that is placed at the end of horseshoe magnet.

4. (A → r); (B → p); (C → s); (D → q)

5. **Concept Map**



6. Away

7. Magnet

8. Towards north

9. Safety measures for magnets –

(1) Magnets should not be heated at high temperatures.

(2) Magnets should not be repeatedly hammered or dropped from some height.

(3) Bar magnets are kept in pairs separated by a piece of wood with unlike poles on the same side with pieces of iron.

(4) A horseshoe magnet needs only one keepers across its poles

10. Magnets become weak if they are not stored properly. To avoid this, bar magnets are kept in pairs separated by a piece of wood, with unlike poles on the same side. Pieces of iron, called **magnetic keepers** or simply **keepers,** are placed across both ends. A horseshoe magnet need only one keeper across its poles.