SUB : Science I		Std : 10th
Marks: 40	**Preliminary Exam : 3**	Time : 2 Hrs

Note :
1) All questions are compulsory.
2) Figures to the right indicate full marks.
3) Draw well labeled diagrams wherever necessary.
4) Students should write the answers in sequence.

Q.1. A) 1) **Find odd one out, give reason for your answer.** (02)

i) Helium, Radon, Argon, Boron

ii) Vinegar, Tamarind, Bitter gourd, Lime Juice

2) **Match the pairs.** (02)

	Column A		Column B
i)	Common salt	**a)**	Sodium sulphate
ii)	Charge	**b)**	ampere
		c)	Sodium Chloride
		d)	Coulomb

3) Write the long form of MRI. (01)

B) Multiple choice questions. (05)

i) .... elements contain 3 to 8 electrons in their outermost shell.

(a) s- block (b) d- block (c) p- block (d) f- block

ii) When small amount of red oxide (CuO) is treated with dil. HCl, the colour of solution becomes blue due to the formation of ....
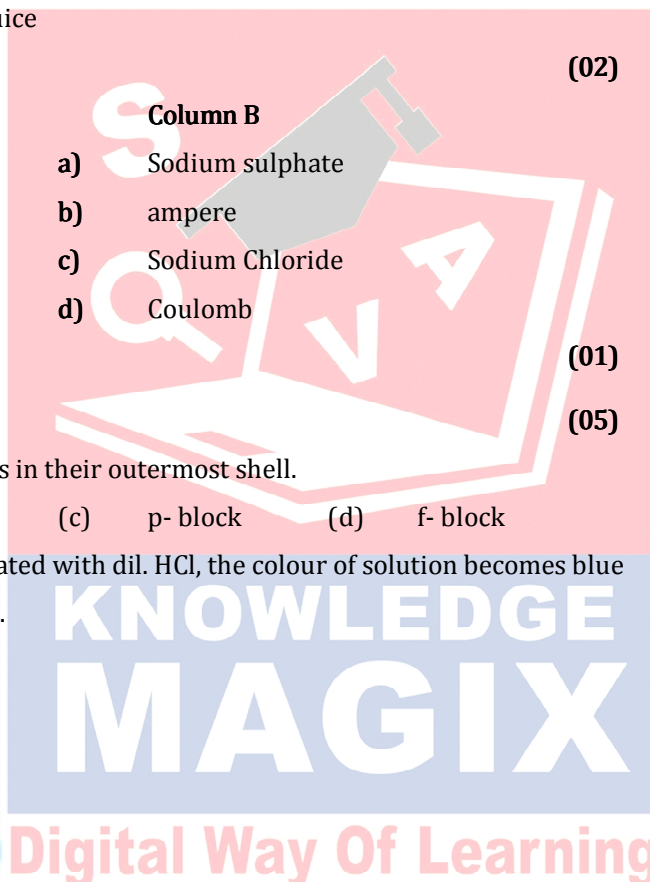
(a) Copper sulphate

(b) Cupric hydroxide

(c) Copper Chloride

(d) Copper Phosphate

iii) When the coil of D.C. generator rotates in the magnetic field .... is produced in the coil.

(a) resistance

(b) potential difference

(c) alternating current

(d) direct current

iv) Waste water originating from kitchen is .... Waste.

(a) industrial

(b) agricultural

(c)   domestic

(d)   thermal

v)   .... is a primary pollutant.

(a)   Ash   (b)   Hydrogen cyanide   (c) SO_3 (d) O_3

Q.2.   Answer the following questions. (Any Five)   **(10)**

1)   Give scientific reason: The chemical equation is needs to be balanced.

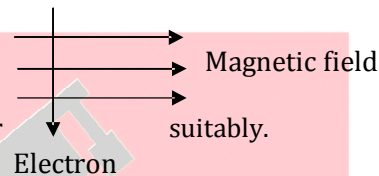**2)**   Is there plant having stinging hair? Name the plant.

3)   What is electric power? What is S.I. unit of electric power?

4)   Place a coin at the bottom of glass jar containing water. Now tilt the jar   suitably. When viewed at a suitable angle the coin appears to be floating. Why?

Magnetic field

Electron

5)   The power of a convex lens is 2 dioptre. Find its focal length.

6)   An electron enters a magnetic field at right angles as shown in the figure. Comment on the direction of force acting on the electron.
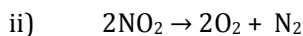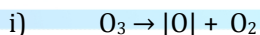
Q.3. Answer the following questions. (Any Five)   **(15)**

1)   Distinguish between: Inert gas elements and Normal elements.(Write minimum three points of each)

2)   Identify the types of reactions.

i) $O_3 \rightarrow |O| + O_2$

ii) $2NO_2 \rightarrow 2O_2 + N_2$

iii) $C_3H_6O + 4O_2 \rightarrow 3CO_2 + 3H_2O$

3)   State Right hand thumb rule. Draw the figure to support your answer.

4)   An object of size 7 cm is placed at 25 cm in front of concave mirror of focal length 15 cm. At what distance from the mirror should a screen be placed so that we can get a sharp and clear image. Find nature and size of the image.

5)   Draw neat and labeled diagram to show the formation of image by concave mirror if **i)** the object is at centre of curvature,   **ii)**   the object is kept at focus.

6)   Describe the main sources of water pollution.

Q.4.   Answer the following questions.   **(05)**

Describe the experiment to show that electric current produces heating effect.

OR

Explain Newton's experiment to show that sunlight is a mixture of seven colours.