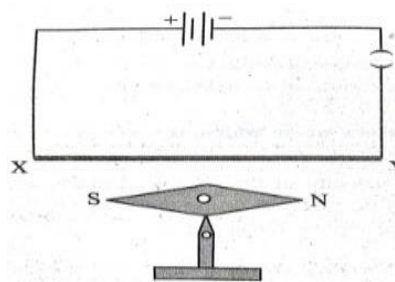


Q.1 A) Match the following

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	Group A		Group B
i	Acceleration due to gravity	a)	m/s^2
ii	Gravitational constant	b)	kg
		c)	Nm^2 / kg^2
		d)	N

- The family of metals having valency two.
- The relative humidity at the dew point is _____.
- How do the properties of iron change when carbon and chromium are mixed with it?
- Which pole of the magnetic needle will move towards wire XY once current starts flowing through the circuit?



5

B) Choose the correct alternative and rewrite the statement.

- In which of the following pairs the displacement reaction does NOT occur?

a) $CuSO_4$ solution and silver metal	b) $AgNO_3$ solution and copper metal
c) $CuSO_4$ solution and Zn metal	d) $FeSO_4$ solution and Al metal
- A ray of light strikes the glass slab at an angle of 40° . What is the angle of incidence?

a) 50°	b) 25°	c) 40°	d) 100°
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- Rusting of iron requires _____.

a) only water	b) only oxygen
c) both oxygen and water	d) neither oxygen nor water
- According to Cartesian sign conventions for lenses.

a) all distance in direction of incident ray are taken positive
b) all distance in direction of incident ray are taken negative
c) height above the principal axis is negative for concave lens.
d) height above the principal axis is negative for convex lens
- Which of the following is not an inert gas?

a) Neon	b) Krypton	c) Radium	d) Radon
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Q.2 Answer the following questions.(Any Five)

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- Complete the following table for the image formation by a concave lens.

Sr. No.	Position of the object	Positions of the images	Size of the images	Nature of the images
i)		On the first focus F_1		Virtual and erect
ii)	Anywhere between optical centre (O) and infinity		Small	

- Give four examples of moderately reactive metals.
- A stone is released from the top of a tower of height 19.6 m. Calculate its final velocity just before

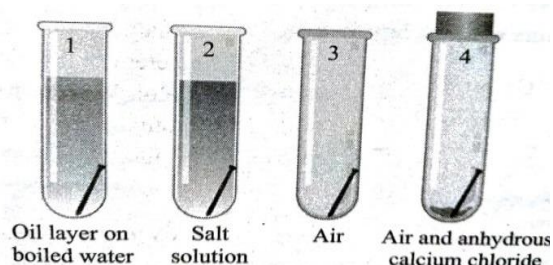
touching the ground.

- 4) Complete the following reaction and answer the given questions: $2\text{H}_2\text{O}(l) \xrightarrow{\text{Electric energy}}$
- What is type of reaction?
 - Define the type of reaction.
- 5) Explain anomalous behaviour of water.
- 6) What are the difference between saturated hydrocarbons and unsaturated hydrocarbons?
- 7) Why are the satellites revolving in high earth orbit called as geosynchronous satellites?

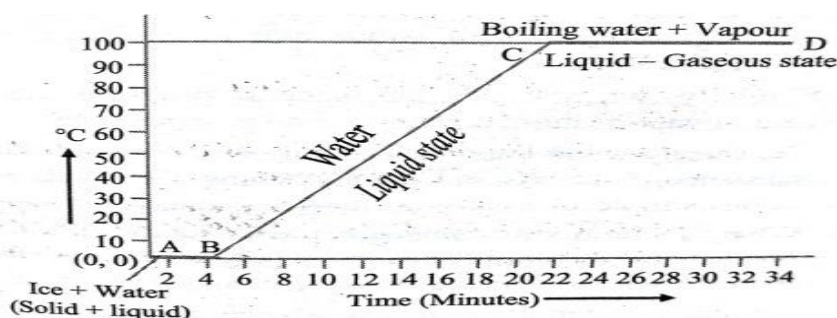
Q.3 Answer the following questions.(Any Five)

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- 1) Four experiments to study the process of rusting are given below. Observe the four test tubes and answer the following questions.
- Why is the nail in the test tube 1 not rusted?
 - What happens in test tube 4? Explain.
 - Why is the rusting of the nail in test tube 2 faster than the nail in test tube 3?



- 2) Prove that a rainbow is the combined effect of the refraction, dispersion, and total internal reflection.
- 3) Explain the term with example: Unsaturated hydrocarbon.
- 4) Explain the following temperature vs time graph.

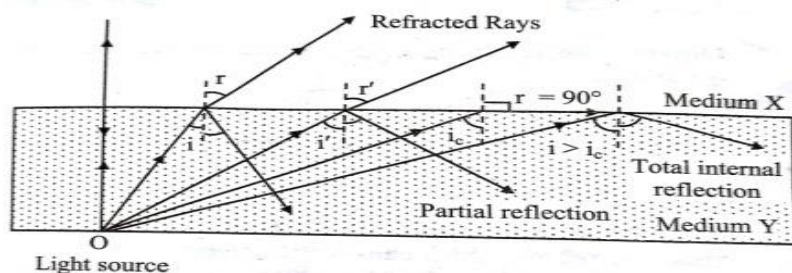


- 5) State the demerits of Mendeleev's periodic table.
- 6) A convex lens forms a real inverted images of a pencil at a distance of 60 cm from the lens. The image formed is of the same size as the object. Find the focal length and power of the lens. At what distance is object placed from the lens?
- 7) Give reasons – Anodes need to be replaced from time to time during electrolysis of alumina.

Q.4 Answer the following question. (Any One)

5

- Which medium has lower refractive index? Why?
- What does the term partial reflection mean?
- If angle of incidence are such that $\angle i < \angle i'$ what will be the relationship between angle of refraction $\angle r$ and $\angle r'$? Why
- What is critical angle?
- At will if angle of incidence is greater than critical angle?



- 2) Explain electrolytic reduction of alumina with the help of neat labelled diagram.

*This question paper is for practice purpose only.