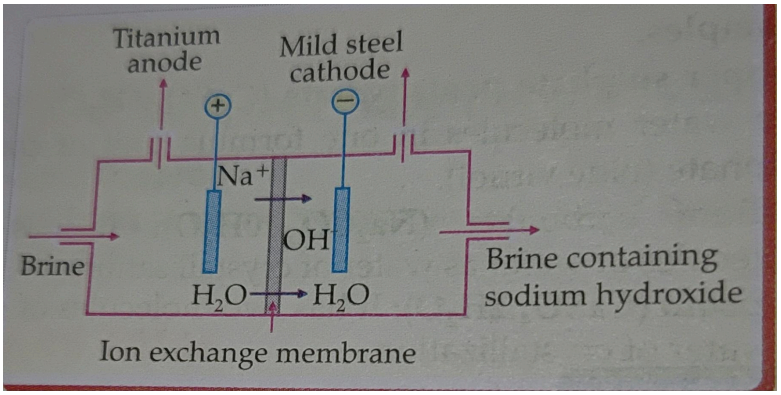
	B.C.M SCHOOL BASANT AVENUE DUGRI ROAD LUDHIANA **Class- X** **Subject- Science** **July Assignment** **Chapters- Acids, Bases and Salts** **Light- Reflection and refraction**
	MCQ
1.	Four solutions, namely glucose, alcohol, hydrochloric acid and sulphuric acid filled in four separate beakers are connected one by one in an electric circuit with a bulb. The solutions in which the bulb will glow when current is passed are: (A) Glucose and alcohol. (B) Alcohol and hydrochloric acid (C) Glucose and sulphuric acid. (D) Hydrochloric acid and sulphuric acid.
2.	You are given water, mustard oil, glycerine and kerosene. In which of these media, a ray of light incident obliquely at some angle would bend the most? (Refractive index of water = 1.33, Mustard oil = 1.46, Glycerine = 1.473, Kerosene = 1.44) (a) Kerosene (b) Water (c) Mustard oil (d) Glycerine
	Assertion-Reason
	a.Both A and R are true and R is the correct explanation of A. b.Both A and R are true but R is not the correct explanation of A. c.A is true but R is false. d.A is false but R is true. e.Both A and R are false.
3.	Assertion: Pure water is neither acidic nor basic. Reason: The pH of a solution is inversely proportional to the concentration of hydrogen ions in it.
4.	Assertion: HCl gas does not change the colour of dry blue litmus

	paper. Reason (R): HCl gas dissolves in the water present in wet litmus paper to form H+ ions.
	Give answer of the following questions
5.	(A) Can a convergent lens in one medium become divergent in another medium? (B) A concave mirror of focal length f produces an image n times the size of an object. What would be the object distance for which image is real?
6.	(a) The blue colour of crystals of a substance changed on heating in a closed test tube but the colour was regained after some time on cooling. Name the substance and write its chemical formula. Explain the phenomenon involved. (b) Write name and chemical formula of two such compounds whose one formula unit is associated with 10 and 2 water molecules respectively.
7	(a) Identify the gases evolved at the anode and cathode in the given experimental setup**.**  (b) Name the process that occurs. Why is it called so? (c) Illustrate the reaction of the process with the help of a chemical equation.

<table>
<tr><td>8.</td><td>A student prepared solutions of (I) an acid and (II) a base in two separate beakers. She forgot to label the solutions and litmus paper is not available in the laboratory. Since, both the solutions are colourless, how will she distinguish between the two?</td></tr>
<tr><td>9</td><td>What will you do if: (A) Your mother has acute problem of acidity and feeling unwell (B) a wasp bites your friends (C) the soil in your farm is acidic and plants do not grow well?</td></tr>
<tr><td></td><td>Case based questions</td></tr>
<tr><td>10</td><td>Vibhav focused the image of a candle flame on a white screen using a convex lens. He noted down the position of the candle screen and the lens on a metre scale as under:

Position of candle = 26cm

Position of convex lens = 50cm

Position of the screen = 90cm

He, then noted down the values of object distance (u), image distance (v) and also calculated the focal length (f) of the convex lens used.

<table>
<tr><th></th><th>Object Distance (u)</th><th>Image Distance (v)</th><th>Focal length (f)</th></tr>
<tr><td>a.</td><td>-26cm</td><td>-50cm</td><td>+30cm</td></tr>
<tr><td>b.</td><td>-26cm</td><td>-40cm</td><td>-15cm</td></tr>
<tr><td>c.</td><td>-24cm</td><td>-40cm</td><td>+15cm</td></tr>
<tr><td>d.</td><td>-24cm</td><td>+40cm</td><td>+15cm</td></tr>
</table>
1. Select the row containing the correct values as per the sign convention.
2. How far the candle be placed from this lens to produce m=-1?</td></tr>
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	3. What will be your observation ,if object position of candle is at 40cm? **4.** Why is such type of lens used in projector?