

Substances in our use :-

Competency Statement-1.2

To be able to write formulae describing the relations between gravitation and motion and using these solve various numerical problem.

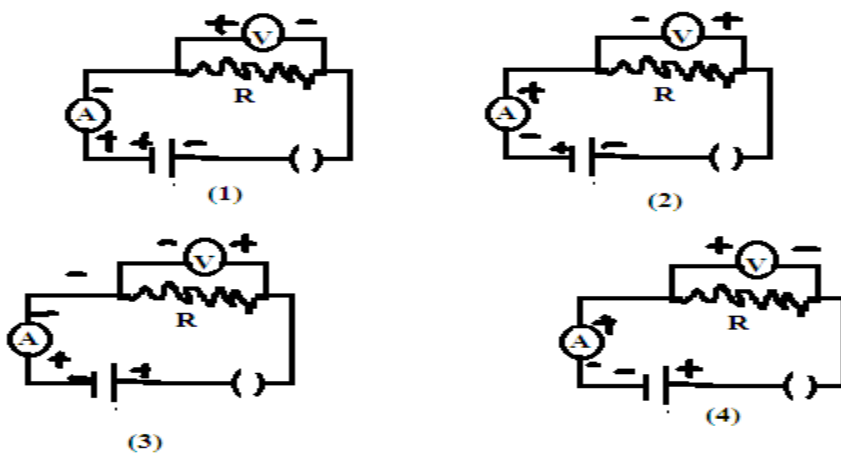
Q. 1:- A ball takes 5 sec to reach the ground from a height of 4 m on a planet. What is the value of 'g' on the planet.

- 1) 0.4 mls<sub>2</sub>      2) 0.1 mls<sub>2</sub>      3) 0.2 mls<sub>2</sub>      4) 0.3 mls<sub>2</sub>

Competency statement- 2.3

To verify the laws of current electricity and to draw conclusions based on them.

Q. 1- Out of four circuit shown for studding the dependence of the current on the potential difference across resister the correct circuit is



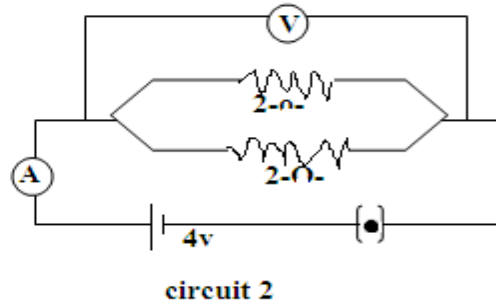
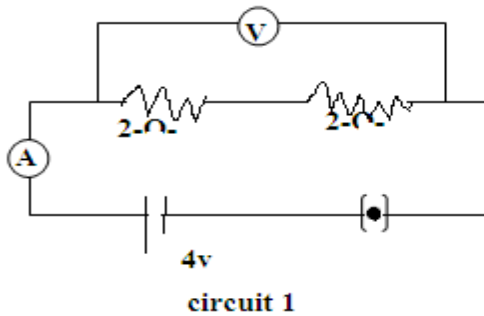
Q. 2 – Archana has to connect 4 cell of 2V each to form a battery of voltage 8V. The correct way of connecting these cell is



**Competency Statement -2.4**

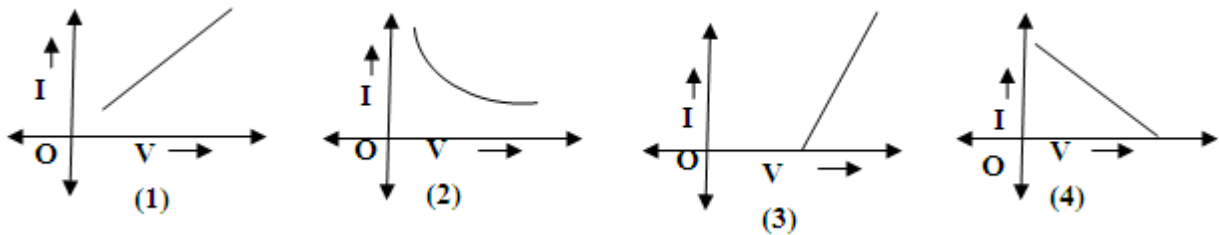
**To develop to solve numerical problems based on effects of current electricity.**

**Q.1 – For the circuit show below. The ammeter reading will be –**



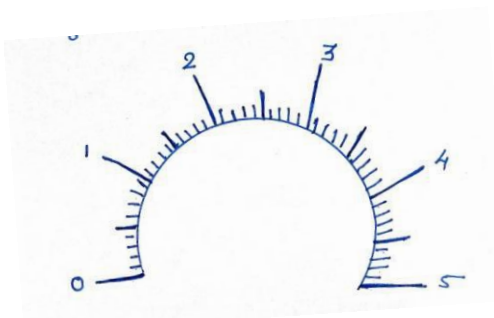
- |   |  |
|---|--|
| 1) 4 A in circuit – I and 1A in circuit- II | 2) 0A in both circuit                    |
| 3) 4A in both circuit                       | 4) 1A in circuit –I and 4A in circuit-II |

**Q. 2 – The graph showing the dependence of current I and potential difference D across a resistor R is –**



Key-1

**Q. 3 – Scale of on ammeter is shown below.**



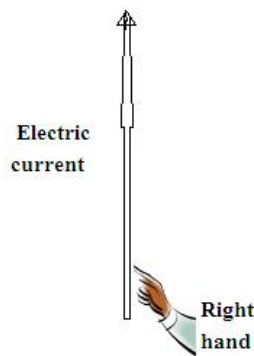
The last count of this ammeter is

- 1) 0.05 A                      2) 0.5 A                      3) 0.1 A                      4) 1A

**Competency Statement -2.5**

**To observe various apparatus based on effects of current electricity and explain their functions with reasons.**

**Q. 1- Imagine that, Rahim has held the conductor in his right hand in such a that his thumb point in the direction of electric current. Then the turn figures around the conductor denotes the direction of magnetic field. The direction of magnetic field is –**

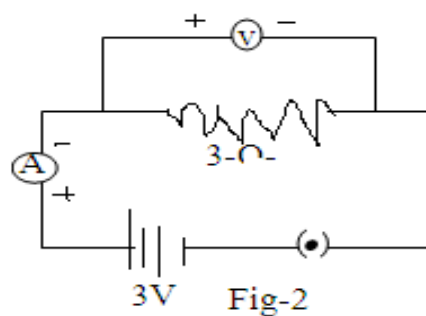
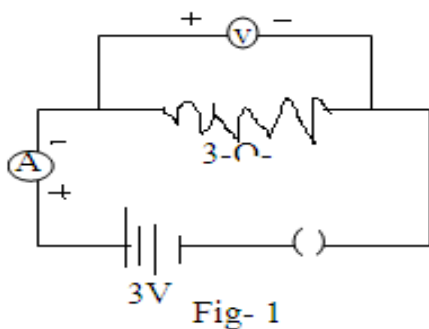


- 1) Upward                      2) downward                      3) clockwise                      4) anticlockwise

**Q. 2 - The symbol 'un' is used for**

- 1) DC signal                      2) AC signal                      3) resistance                      4) battery

**Q. 3 – For the circuit shown in fig-1 and fig-2, ammeter reading will be --**

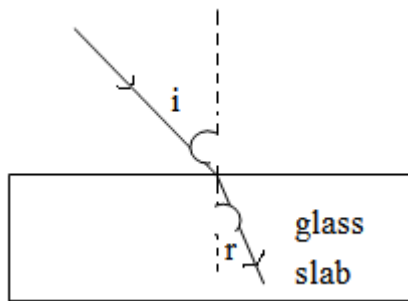


- 1) A in circuit- 1 and OA in circuit 2
- 2) 1A in both circuit
- 3) O A in both circuit
- 4) O A in Circuit -1 and 1A in circuit -2

**Competency Statement -2.7**

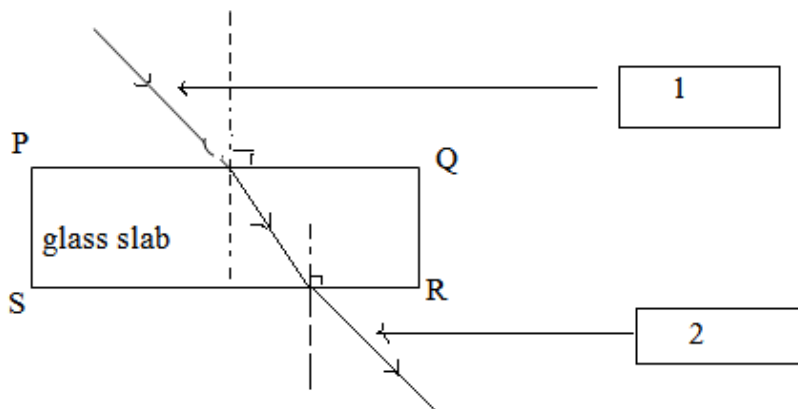
**To explain properties of light, the images formed by lenses and their use in different equipments used in day to day life.**

**Q. 1 - The path of a ray of light passing through a rectangular glass slab was traced and angles measured. The correct relation of angles be-**



- 1)  $i = r$
- 2)  $i > r$
- 3)  $i < r$
- 4)  $r = 90^\circ$

**Q. 2 - Name of labeled the figure.**



- 1) Reflected ray
- 2) Incident ray:
- 3) Incident ray; Refracted ray
- 4) Refracted ray; Emergent ray

Raheman was going to school in his car. While driving his car, he saw a man behind him on a motorcycle through his rear-view mirror. He noticed that the saree of women who sitting behind the man was almost touching the spokes. He signaled the motorcyclist to stop and alerted the women.

**Q. 3 – What kind of mirror is used by Raheman as rear –view mirror?**

- 1) Concave mirror      2) Convex mirror      3) con cave lens      4) convex lens

**Q. 4 – The image of motorcyclist seen by Rahman through mirror is -----**

- 1) Irrted and same as object      2) smaller than the object  
3) larger than the object      4) Inverted and same as object.

**Q. 5 – Meena has difficulty in reading the blackboard while sitting in the last row. What could be the defect she is suffering from?**

- 1) Myopia      2) Preshyopia      3) Hypermetropia      4) cataract

**Q.6- Which cell respond to color of light?**

- 1) Rod shaped cells      2) Cone shaped cells      3)Both types of cells      4) Circular shaped cell

**Q.7 - If these were no atmosphere on the earth, the duration of day light would be –**

- 1) decrease      2) increase      3) become infinite      4) remain unchanged

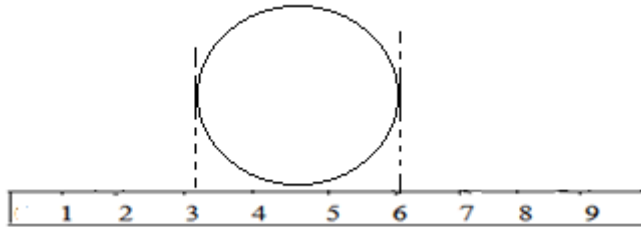
**Q. 8 - A Spring is filled with 'X'. when the plunger is pushed inwards, the volume of 'X' remains unchanged.**

**What can X be**



- 1) Helium      2) Mercury      3) Nitrogen      4) Carbon dioxide

**Q. 9 - Using big, final the circumference of ring**



- 1) 9.42 units      2) 18.82 units      3) 7.0 65 units      4) 28.26 units

**Q.10 –Which of the following properties show the anomalous behavior of water. (page.no.64)**

- 1) Volume of water contract up to  $0^{\circ}\text{C}$  to  $4^{\circ}\text{C}$  and expand above  $4^{\circ}$
- 2) Volume of water expand up to up to  $0^{\circ}\text{C}$  to  $4^{\circ}\text{C}$  and expand above  $4^{\circ}$
- 3) Volume of water neither be contract nor expand.
- 4) Volume of water only contract of any point and any condition.

**Q. 11 - Light change its direction when going from one transparent medium to another transparent .**

**(page.no. 73)**

**This is called----**

- 1) Refraction of light    2) Reflection of light    3) Incident of light    4) Dispersion of light

**Q.12 – Centripetal force acted on the object is ----- (page. No. 5)**

- 1) Away from the centre .      2) Towards the centre of the circle
- 3) Tangentially on the object.      4) In the outer side of the object.

**Q. 13 – In free fall the initial velocity of object is zero and goes on increasing due to the ----- (page.no.11)**

- 1) acceleration due to the gravity of the earth
- 2) effect of air is fall on the object
- 3) because the object is weighted.
- 4) buoyant force acts on the object.

**Q.14- Four resistors of resistances of  $12\Omega$ ,  $4\Omega$ ,  $5\Omega$  air connected in series what is the effective resistance in the circuit?**

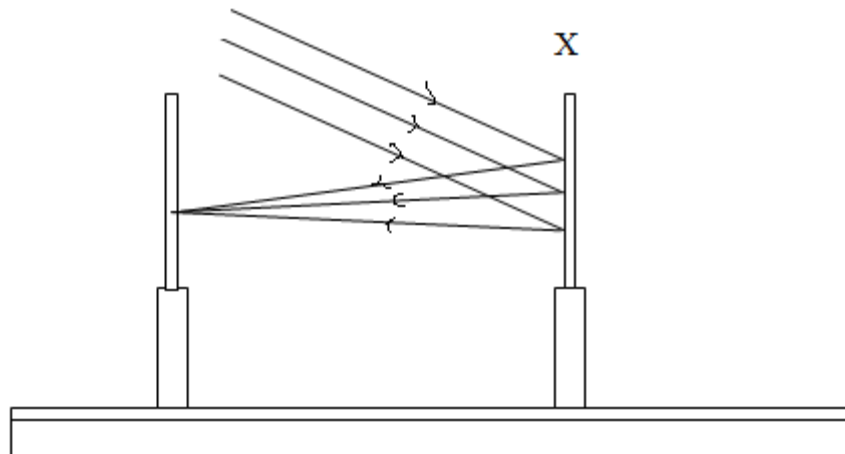
(page.no. )

- 1)  $22\ \Omega$       2)  $18\ \Omega$       3)  $21\ \Omega$       4)  $20\ \Omega$

**Competency Statement -2.8**

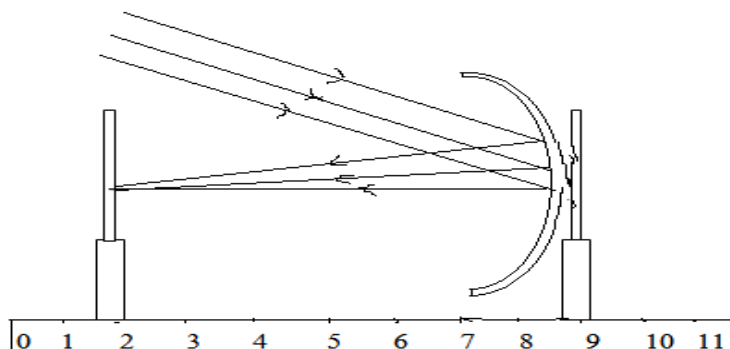
**To find out the focal length of a lense using given data.**

**Q. 1 Ramesh determines the focal length of a device 'X' by focusing the image of a for off object on the screen positioned as show in the figure the device 'X' is-**



- 1) Convex lens      2) Concave lens      3) Convex mirror      4) plane mirror

**Q. 2 – The focal length of concave mirror in the experimental set up is shown below is -**



1) 2 units

2) 9 units

3) 11 units

4) 7 unit

**Competency Statement-3.1 :- To explain systematic classification of elements and their positions in the periodic table.**

**Atomic radius of elements present in a 2<sup>nd</sup> period of modern periodic table is as share below.**

Element :            Li    Be    N    C    B    O

Atomic radius:    152    111    74    77    88    66

(pm)

**Q.1:- Which of the above element have smallest atomic size.**

1) o    2) Be    3) Li    4) B



**Q.2:- By observing the periodic trend in the variation of atomic radius in a period conclude that.**

- 1) Atomic size increases from left to right.
- 2) Atomic size decreases from left to right.
- 3) Atomic size remain constant through and the period.
- 4) Atomic size firstly increases and then decreased gradually across the period.

(Analysis based and critical thinking.)

**Q.3:-** Which of the following elements are used as catalyst.

- 1) S-block elements.
- 2) P-block elements.
- 3) d-block elements.
- 4) F-block elements.

**Statement-1-** metal have tendency to lose the valence e-s

**Statement -2-** In an atoms of metal effective nuclear charge exerting attractive force on the valence element is small.

**Q.4:-** Which of the following option is correct.

- 1) Statement 1 is wrong.
- 2) Statement two is the reason of statement 1
- 3) Statement one is the reason of statement 2
- 4) Both the statements are wrong.

**Q.5:-** Which of the following element & Lholegen family appears in said state.

- 1) Fluorine ( $F_2$ )
- 2) Clorine ( $Cl_2$ )
- 3) Bromin ( $Br_2$ )
- 4) Iodine ( $I_2$ )

**.Q.6:- In which block of the modern periodic table are the nonmetals found ?**

- 1)S-block    2)P-block    3)D-block    4)F-block

**Q.7:- When we eat food we get energy to do work. i.e. during digestion of food energy is produced**

**Thus digestion of food is .....type of reaction.**

- 1)displacement reaction  
2)double displacement reaction  
3)exothermic reaction  
4) endothermic reaction

**Q.8:- When a solution containing soluble calcium hydroxide is applied on the wall with a brush**

**The gas 'X' present in the air will come into its contact and as a result a thin layer of calcium**

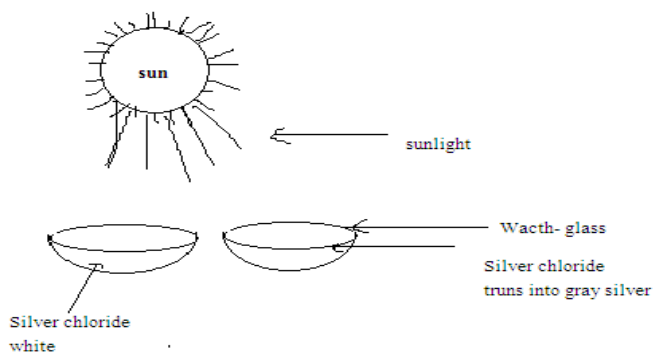
**carbonate (white) will be deposited on the wall, known as white wash. Which of the following**

**gas should be 'X' ?**

- 1) H<sub>2</sub>    2)O<sub>2</sub>    3)CO<sub>2</sub>    4)N<sub>2</sub>

**Competency Statement 3.2 :- To identify type of chemical reaction in two components.**

**In the adjoining Pic. White Silver chloride turns into grey silver.**



**Q.1:- Which type of reaction does the above Pic. show.**

- 1) Combination reaction
- 2) decomposition reaction
- 3) displacement reaction
- 4) double displacement reaction

**Pratysh took sulphur powder on a spatula & heated it. He collected the gas evolved by inverting a test tube over it.**

**Q.2:- What will be the action of gas on moist litmus paper.**

- 1) no effect on litmus paper.
- 2) blue litmus turns red.
- 3) red litmus turns blue.
- 4) reacts with both the litmus paper.

**Q.3:- Which of the following element has good catenation power.**

- 1) Oxygen
- 2) Carbon
- 3) hydrogen
- 4) chlorine

**Competency statement 3.3:- To verify chemical reaction experimentally and draw conclusions.**

**Q.1:- Which of the following is the right balanced equation?**



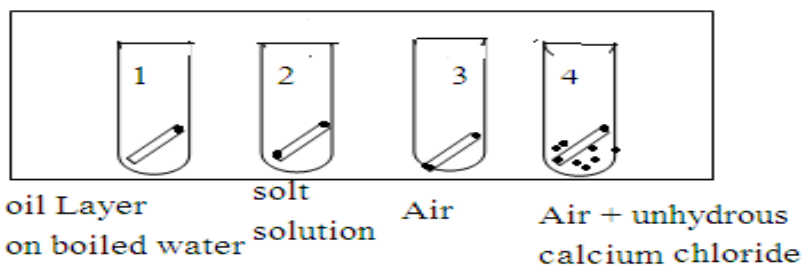
- 1)  $\text{AgNO}_3 + 2\text{NaCl} \rightarrow \text{AgCl} + \text{NaNO}$
- 2)  $\text{AgNO}_3 + \text{NaCl} \rightarrow \text{AgCl} + 2\text{NaNO}_2$
- 3)  $\text{AgNO}_3 + \text{NaCl} \rightarrow \text{AgCl} + \text{NaNO}_3$
- 4)  $\text{AgNO}_3 + 2\text{NaCl} \rightarrow 2\text{AgCl} + \text{NaNO}_3$



Type of the above reaction is

- |                          |                                 |
|--------------------------|---------------------------------|
| 1) Displacement reaction | 2) decomposition reaction       |
| 3) Combination reaction  | 4) double displacement reaction |

**Q.3:-** Which of the above test-tube is suitable for the nail prevention of corrosion?

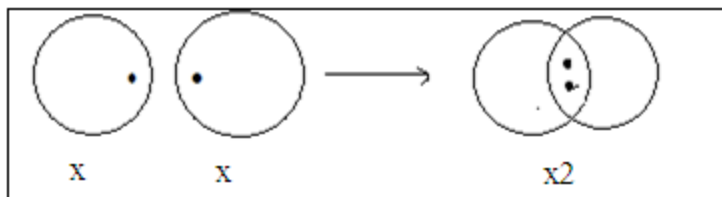


**Competency Statement 3.4**

**To correct the chemicals equation which is incomplete or wrong**

**Q.1:-** Which of the following are electrolytes.

- 1) glucose      2) urea      3) diamond      4) graphite



**Q.2:-** Which type of bonding is represented in above diagram.

- 1) Ionic bond      2) Co-ordinate bond      3) Covalent bond      4) Electrostatic bond

**Q.3:- Which of the following methods is suitable for preventing an iron pan from rusting**

- 1)applying grease                      2)applying paint  
3)applying a coating of zinc    4) prevention of on iron pan from resting is not possible.

**Q.4:- Molecular formula of ethane is**

- 1)  $\text{HC} \equiv \text{CH}$       2)  $\text{H}_3\text{C} - \text{CH}_2 - \text{CH}_3$       3)  $\text{H}_2\text{C} = \text{CH}_2$       4)  $\text{CH}_3 - \text{C} \equiv \text{Ch}$

**Competency Statement 3.6:- To take proper care while performing the experiments and handling of the apparatus considering the effect of chemical reactions on human health.**

**Q.1:- The molecular formula of the members of the homologous series of alkenes can be represented by a general formula  $\text{C}_n\text{H}_{2n}$ , if  $n=3$ , what would be the name of alkenes so formed.**

- 1)Butane      2) Ethane      3) pentene      4) propane

**Competency Statement 3.8:- To understand the relationship between chemical reaction of metals in daily life and use them to solve various problem.**

**Q.1:- When leafy vegetables are boiled in aluminum utensils regains its luster. Which type of reaction takes place in above process.**

- 1) aluminum gets reduced.  
2) aluminum onide formed is gets reduced.  
3) aluminum utensils undergoes neutralization reaction.  
4) Combination reaction is takes place.