Brain International School

Vikas Puri, New Delhi

ASSIGNMENT NO. 5

SUBJECT: SCIENCE CLASS-VIII NOVEMBER'2025

Chapter -11 Chemical Effects of Electric Current

1. **Choose the correct option:**

i. An electric current can produce

a) heating effect only b) chemical effect only

c) magnetic effect only. d) chemical, heating, and magnetic effects.

ii. An electrolyte is a

a) solid that conducts electricity

b) liquid that conducts electricity and breaks up chemically in the process.

c) liquid that does not conduct electricity.

d) solid that does not conduct electricity.

2. **In each of the following questions, two statements are given one labelled. Assertion (A) and the other labelled Reason (R). Select the correct answer to these questions the codes (a), (b), (c) and (d) as given below:**

a) Both A and R are true, and R is correct explanation of the assertion.

b) Both A and R are true, but R is not the correct explanation of the assertion

c) A is true, but R is false

d) Both assertion and reason are false.

(i) Assertion (A): When electric current passes through acidified water, it decomposes into hydrogen and oxygen gases.

Reason (R): Electric current causes a chemical reaction in the solution, known as electrolysis.

(ii) Assertion (A): All liquids are good conductors of electricity.

Reason (R): Every liquid has ions that can move freely.

3. Answer the following question.

1. Show with the help of a diagram that lemon juice and vinegar are good conductors of electricity.
2. Riya wants to deposit silver on an iron spoon. She took silver nitrate ($AgNO_3$) solution in a beaker and setup a simple circuit for electroplating. Which terminal of the battery should the spoon be connected to? What material should the other electrode be made of?
3. You are provided with a magnetic compass, an empty match box, a battery of two cells and connecting wires. Using these objects how will you make a tester for testing an electric circuit? Draw the necessary circuit diagram and explain.
4. What is an LED? Why is it preferred to other type of bulbs?
5. What happens when electric current is passed through the copper sulphate solution?
6. Rajan made the circuit shown in Fig. He wanted to observe what happens when an electric current is passed through water. But he forgot to add a few drops of lemon juice to water. Will it make any difference to his observations? Explain. Can you explain the reason?

4. Answer the following case study-based questions

A science teacher demonstrated the passage of electric current through acidified water using two test tubes and a battery. Gas bubbles were observed at both electrodes — more on one side than the other.

(i) What are the gases formed at the two electrodes?

(ii) Why are more bubbles formed at one electrode?

(iii) Why is acid added to the water before electrolysis?

(iv) What does this experiment prove about water?

Chapter -13: Light

1. **Choose the correct option:**

i. We can see a non-luminous object when light:

a) emitted by the object falls on the eye.

b) is reflected from the object towards our eye.

c) completely passes through the object.

d) gets completely absorbed by the object.

ii. What kind of image is formed by a plane mirror?

a) Real and inverted

b) Virtual and erect

c) Magnified and real

d) Reduced and virtual

2. In each of the following questions, two statements are given one labeled Assertion (A) and the other labelled Reason (R). Select the correct answer to these questions from the codes (a), (b), (c) and (d) as given below:

a) Both A and R are true, and R is correct explanation of the assertion.

b) Both A and R are true, but R is not the correct explanation of the assertion.

c) A is true, but R is false.

d) Ais false, but R is true.

(i) **Assertion**: A plane mirror always forms a virtual and erect image.

Reason: The reflected rays from a plane mirror actually meet to form an image.

(ii) **Assertion**: Periscope works on the principle of multiple reflection of light.

Reason: It uses two plane mirrors placed parallel to each other.

3. Answer the following question.

1 What is cataract? How is it caused?

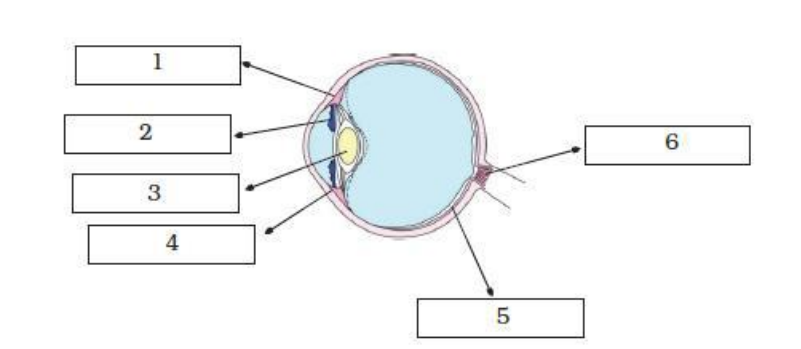
2. Explain the process which enables us to perceive motion in a cartoon film.

3. What is the Braille system? How is it helpful?

4. How is the phenomenon of reflection used in making a kaleidoscope? What are the applications of a kaleidoscope?

5. (a) What happens to light when it gets dispersed? Give an example.
   (b) Explain the ways by which you can take care of your eyes.

6. Write down the names of parts of the eye in the blank spaces shown in Fig.



4. Answer the following case study-based question

The light ray that falls on a mirror is called the incident light ray. The ray that comes back from the surface after reflection is called the reflected light ray. The point where the incident ray strikes the reflecting surface is called the point of incidence. A line drawn perpendicular to the mirror at the point of incidence is normal. If the rays, after reflection from a surface, are parallel, then the reflection is termed regular reflection. When parallel rays, after reflection from a surface, are not parallel, then it is called diffused reflection.

(i) Rakhi switched on a torch light and pointed it towards a mirror. She calculated the angle of the incident and found it to be 50°. What is the angle of reflection?

(ii) A student switched on a torchlight and points it towards a rough reflecting surface. What is likely to happen to the rays of light emitted from the torch?

(iii) Draw and also state two points of difference between regular and diffused reflection.