

# BOARD QUESTION PAPER : MARCH 2017

## SCIENCE

Time: 2 Hours

Total Marks: 40

Note:

- Draw well-labelled diagrams wherever necessary.
- All questions are compulsory.
- Students should write the answers of questions in sequence.

### SECTION A

Q.1. (A) (a) Find the odd man out: [2]

- Camphor, Ammonium Chloride, Naphthalene balls, Sugar
- Turmeric, Methyl Orange, Rose petals, Beetroot.

(b) Match the following: [2]

	Column I		Column II
i.	Myopia	(A)	Converging power of eye lens becomes low
ii.	Hypermetropia	(B)	Converging power of eye lens remains the same
		(C)	Converging power of eye lens becomes high

(c) Fill in the blank: [1]

To increase the effective resistance in a circuit the resistors are connected in \_\_\_\_\_.

(B) Rewrite the following statements by selecting the correct options: [5]

- $\text{CaCO}_3 \xrightarrow{\Delta} \text{CaO} + \text{CO}_2 \uparrow$  is a \_\_\_\_\_ reaction.  
(A) combination (B) displacement  
(C) double displacement (D) decomposition
- The colour of universal indicator solution is \_\_\_\_\_.  
(A) red (B) blue  
(C) green (D) greenish yellow
- The height of the image formed by an object of height 10 cm placed in front of a plane mirror is \_\_\_\_\_.  
(A) 5 cm (B) 10 cm  
(C) 15 cm (D) 20 cm
- When the resistance of a conductor increases, the current will \_\_\_\_\_.  
(A) increase (B) decrease  
(C) remain the same (D) become double
- Lime water turns milky when \_\_\_\_\_ gas is passed through it.  
(A)  $\text{H}_2$  (B) CO  
(C)  $\text{CO}_2$  (D)  $\text{SO}_2$

2. Answer any five of the following: [10]

- State any two applications of baking soda.
- Define magnetic lines of force and state its two properties.
- Differentiate between Normal elements and Transition elements.
- Classify the given sources of water pollution as natural and man made:
  - domestic waste
  - dead animals
  - oil spills
  - ashes released due to forest fires.
- An object is held 20 cm away from a converging lens of focal length 10 cm. Find the position of the image formed.
- Define scattering of light.

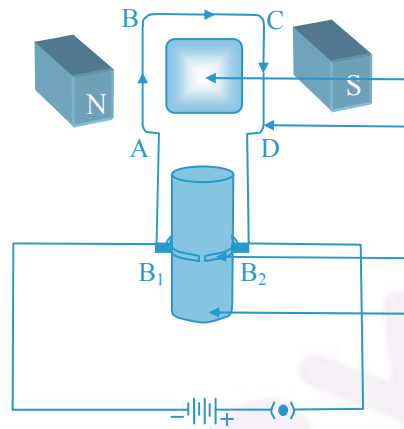
3. Solve any five of the following questions:

[15]

- i. Define corrosion. What is meant by rust? Write the chemical formula of rust.
- ii. Complete the following table:

Instrument	Number of Convex Lenses	Use
Simple Microscope	_____	_____
Compound Microscope	_____	_____
Telescope	_____	_____

- iii. What do you do in the following situations:
  - a. Exposed to exhaust fumes in traffic.
  - b. Exposed to a series of fire crackers with high sound level.
  - c. Get turbid drinking water during monsoon.
- iv. Label the four parts of electric motor and write two uses of DC motor.

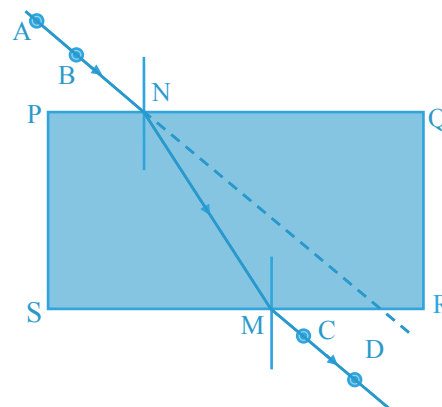


- v. State any three demerits of Mendeleev's periodic table.
- vi. Draw the electrical symbols of the following components and state its use:
  - a. Wire crossing
  - b. Rheostat (variable resistance)
  - c. Ammeter.

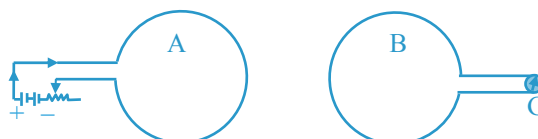
4. Answer any one of the following questions:

[5]

- i. Observe the following figure and answer the questions given under it:
  - a. How many times does refraction take place in the above figure?
  - b. What happens to the ray of light when it passes from air to glass?
  - c. What happens to the ray of light when it passes from glass to air?
  - d. What are the rays AB and CD in the figure called?
  - e. Define refraction.



- ii. a. Find the expression for resistivity of a material and state the SI unit of resistivity. (3)
- b. Observe the following figure:



If the current in the coil A is changed, will some current be induced in the coil B? Explain. (2)