B.K. BIRLA CENTRE FOR EDUCATION

SARALA BIRLA GROUP OF SCHOOLS
A CBSE DAY-CUM-BOYS' RESIDENTIAL SCHOOL

PERIODIC TEST-I 2025-26
SCIENCE MARKING SCHEME (086)

Class: X   Time: 1hour
Date: 03.07.25   Max Marks: 25

Section A

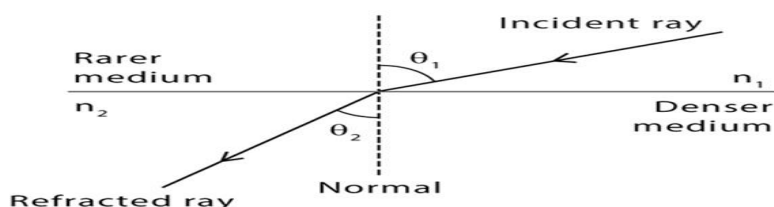1. (d) all reflecting surface   1
2. d) Displacement reaction   1

3. (c) starch into simple sugars   1

Section B

4.   2

Snell's Law

Snell's Law gives a relationship between the angles of incidence (θ_1) and refraction (θ_2) when a ray of light travels from a rarer medium of refractive index (n_1) to a denser medium of refractive index (n_2)

$$n_1\sin\theta_1 = n_2\sin\theta_2$$


5.   2

If the image formed by a spherical lens is always erect and diminished, regardless of the object's position, then the lens is a concave lens. Concave lenses are known to produce virtual, erect, and diminished images.
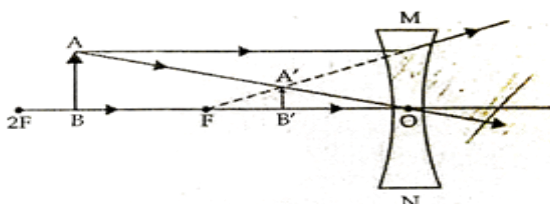
6.   oxidation: Gain of oxygen/loss of Hydrogen by the elements   2
     reduction: Gain of hydrogen/ loss of oxygen by the elements
     ZnO+C -→ Zn + CO

7.   Exchange of ions in a chemical reaction is known as the Double displacement reaction   2
     .
                      Na2SO4 + BaCl2 -→ BaSO4 + NaCl
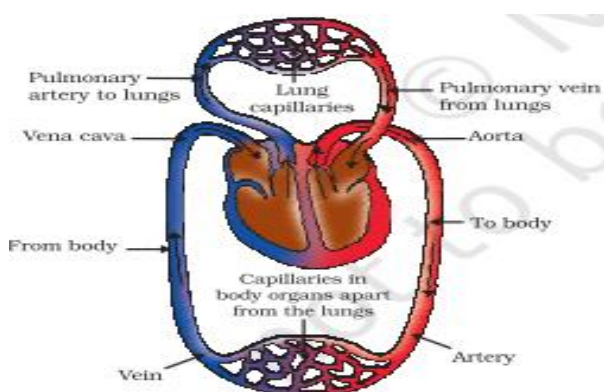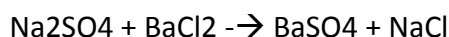
8.   (a) transpiration: the loss of water in the form of vapour from the aerial parts of the   1+1
     plant, and translocation is the transport of soluble products of photosynthesis.
     (b) aerobic respiration is the breakdown of food in the presence of oxygen and
     anaerobic respiration is the breakdown of food in the absence of oxygen.

Section C

9. Given : object distance, u = -15 cm,
    object height, h = 4 cm, focal length f = -10 cm;
    Image distance, v = ?
    Using mirror formula,
    $\frac{1}{v} + \frac{1}{u} = \frac{1}{f} \Rightarrow \frac{1}{v} + \frac{1}{(-15)} = \frac{1}{-10} \Rightarrow \frac{1}{v} = \frac{1}{15} - \frac{1}{10}$
    or $\frac{1}{v} = \frac{10-15}{150} = \frac{-5}{150} = \frac{-1}{30}$ or v = -30
    In order to obtain a sharp image of the object on the screen, screen should be placed at a distance of 30 cm
    in front of the mirror.
    Also, magnification, m = $\frac{h'}{h} = \frac{-v}{u}$
    or $\frac{h'}{4} = -\frac{(-30)}{(-15)}$ or h' = $\frac{-(30) \times 4}{(15)}$ = -2 × 4
    or h' = -8 cm
    Thus, the height of the image is 8 cm.

3

.   3

                                                                                              2+1

11.

In Double circulation, blood goes through the heart twice during each cycle.
It is important to maintain constant body temperature.

12. (a) transpiration and O_2 through stomatal pore.   2+1
     (b) Amount of excess water and amount of dissolved waste in the body.

10. $PbNO3 \rightarrow PbO + NO_2 + O_2$
X : $PbNO_3$
Y: NO_2
Z : PbO