



INDIAN SCHOOL MUSCAT  
SECOND PERIODIC ASSESSMENT  
SCIENCE - 086



CLASS: X

MAX.MARKS: 20

DATE: 05.05 21

TIME ALLOWED: 40 MINUTES

Note:

1. Answer All the Questions.
2. Draw a labelled diagram wherever it is necessary.
3. Make your handwriting legible. Scan your answer paper properly and upload it on time.

**PHYSICS**

- |   |  |   |
|---|--|---|
| 1 | The refractive index of water with respect to air is $\frac{4}{3}$ . What is the refractive index of air with respect to water?  | 1 |
| 2 | A student wants to project the image of candle flame on a screen 48cm in front of mirror by keeping the flame at a distance of 12cm from its pole. Suggest the type of mirror he should use. | 1 |
| 3 | State laws of refraction.  | 2 |
| 4 | a) What is meant by Magnification of spherical mirror?   | 3 |
|   | b) An object of height 2cm is placed at a distance of 16cm from a concave mirror which produces a real image of 3cm height. Find the position of the image.                                  |   |

**CHEMISTRY**

- |   |   |   |
|---|---|---|
| 1 | Hydrogen being a highly inflammable gas and oxygen being a supporter of combustion, yet water which is a compound made up of hydrogen and oxygen is used to extinguish fire. Why? | 1 |
| 2 | Balance the following chemical equations.   | 1 |
|   | a) $\text{Ca(OH)}_2 + \text{HNO}_3 \rightarrow \text{Ca(NO}_3)_2 + \text{H}_2\text{O}$  |   |
|   | b) $\text{MnO}_2 + \text{HCl} \rightarrow \text{MnCl}_2 + \text{H}_2\text{O} + \text{Cl}_2$   |   |
| 3 | a) In electrolysis of water, why is the volume of gas collected over one electrode double that of gas collected over the other electrode?   | 2 |
|   | b) What do you mean by exothermic and endothermic reactions?  |   |
| 4 | a) A white salt on heating decomposes to give brown fumes and a residue is left behind. Name the salt and residue formed.   | 3 |
|   | b) Define combination reaction.   |   |
|   | c) Give one example of a combination reaction which is also exothermic. Write chemical equation.  |   |

## **BIOLOGY**

- 1      If a person is working on a treadmill in a gymnasium, will it affect his rate of breathing? Give a reason. 1
  
- 2      a ) Why doesn't the lungs collapse even after the forceful expiration? 2  
      b ) State one difference between aerobic and anaerobic respiration.
  
- 3      a) Why is the rate of breathing much faster in aquatic organisms than those of terrestrial organisms? 3  
      b) What is the function of trachea? Mention the advantages of having mucus and fine hair in the nostrils?