INDIAN SCHOOL SOHAR
PERIODIC TEST I (2022-23)
SCIENCE (086)
Class: X
Max Marks: 20
Date: 22/05/2022
Time: 45 minutes

## General Instructions:

1. All questions are compulsory.
2. The Question Paper contains three sections.
3. Section $A$ has 5 questions of 1 mark each.
4. Section B has 3 questions of 2 marks each.
5. Section C has 2 questions of 3 marks each and 1 case study question of 3 marks.

| Q.No. | SECTION A | Marks |
| :---: | :---: | :---: |
| 1. | When a plane mirror is rotated through a certain angle, the reflected ray turns through twice as much and the size of the image: <br> a) is doubled <br> b) is halved <br> c) becomes infinite <br> d) remains same. | 1 |
| 2. | Calcium oxide reacts vigorously with water. Identify the incorrect statements. <br> i. It is an endothermic reaction. <br> ii. Slaked lime is produced. <br> iii. Quick lime is produced. <br> iv. It is an exothermic reaction. <br> v. It is a combination reaction. <br> a) i and ii <br> b) iii and iv <br> c) i and iii <br> d) ii, iv and v | 1 |
| 3. | Which of the following pairs will give dis-placement reactions? <br> a) $\mathrm{FeSO}_{4}$ solution and Copper metal <br> b) $\mathrm{AgNO}_{3}$ solution and Copper metal <br> c) $\mathrm{CuSO}_{4}$ solution and Silver metal <br> d) NaCl solution and Copper metal | 1 |
| 4. | The questions below consist of two statements one labelled Assertion (A) and the other labelled Reason ( $R$ ). Select the correct answer to these questions from the codes (i), (ii), (iii) and (iv). <br> i) Both $A$ and $R$ are true and $R$ is the correct explanation of the Assertion. <br> ii) Both $A$ and $R$ are true but $R$ is not the correct explanation of the Assertion. <br> iii) $A$ is true but $R$ is false. <br> iv) $A$ is false but $R$ is true. <br> Assertion: The inner lining of the small intestine has numerous finger-like projections called villi. <br> Reason: The villi increase the surface area for absorption. | 1 |
| 5. | Assertion: The opening and closing of the stomatal pore is the function of the guard cells. <br> Reason: The guard cell swells when water moves out of them. | 1 |
| SECTION B |  |  |
| 6. | It is desired to obtain an erect image of an object, using a concave mirror of focal length 20 cm . <br> a) What should be the range of distance of the object from the mirror? <br> b) Will the image be bigger or smaller than the object? <br> c) Draw a ray diagram to show the image formation in this case. | 2 |


| 7. | a) What is the brown coloured gas evolved when lead nitrate crystals are heated in a dry test tube? <br> b) Why do we store halides (chloride, bromide and iodide) of silver in dark coloured bottle? | 2 |
| :---: | :---: | :---: |
| 8. | A potted plant with variegated leaves having green and yellow patches was used in an experiment to prove that chlorophyll is essential for photosynthesis. Before the experiment the green portion ' A ', and the pale yellow portion ' B ', were traced. <br> a) In the above activity, why was the potted plant with variegated leaves kept in a dark room for three days? <br> b) What will be the colour of the parts labelled ' $A$ ' and ' $B$ ' in the leaf after the starch test? Justify. | 2 |
| SECTION C |  |  |
| 9. | CASE STUDY <br> Case study question is followed by three sub-questions ( $a, b$ and $c$ ). <br> The curved surface of a spoon can be considered as a spherical mirror. A highly smooth polished surface is called mirror. The mirror whose reflecting surface is curved inwards or outwards is called a spherical mirror. Inner part works as a concave mirror and the outer bulging part acts as a convex mirror. The centre of the reflecting surface of a mirror is called pole and the radius of the sphere of which the mirror is formed is called radius of curvature. <br> a) Rekha placed a juice bottle at a distance of 20 cm in front of a convex mirror which has a focal length of 20 cm . Where is the image likely to form? <br> b) When a concave mirror is held towards the sun and its sharp image is formed on a piece of carbon paper for some time, a hole is burnt in the carbon paper. What is the name given to the distance between the mirror and carbon paper? <br> c) A child is standing in front of a magic mirror. She finds the image of her head bigger, the middle portion of her body of the same size and that of the legs smaller. Name the order of combinations for the magic mirror from the top. | 3 |
| 10. | a) What is observed when a solution of potassium iodide is added to a solution of lead nitrate taken in a test tube? <br> b) What type of reaction is this? <br> c) Write a balanced chemical equation to represent the above reaction. | 3 |
| 11. | We need food to fuel our body, to produce energy for growth, development and repair. The digestive system converts the food we eat into absorbable forms. <br> a) Given below is a table on the digestive glands and their functions. Complete the blanks 'A' to 'D'. <br> b) Which one has the longest small intestine herbivore or carnivore? Justify. | 3 |

