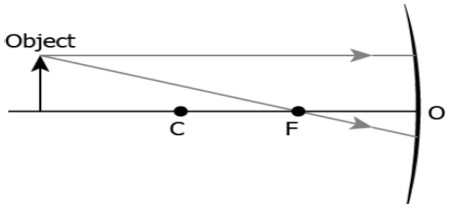
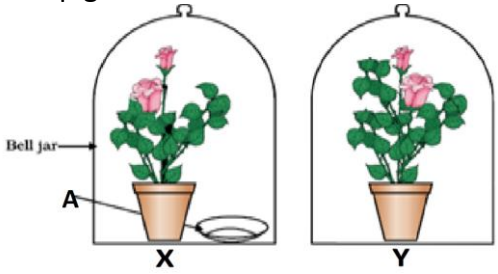
INDIAN SCHOOL SOHAR
PERIODIC TEST I (2022 - 23)
SCIENCE (086)

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.	The image shows the path of incident rays to a concave mirror.  Where would the reflected rays meet for the image formation to take place? a) behind the mirror b) between F and O c) between C and F d) beyond C	1
2.	$Ca(OH)_2 + 2HNO_3 \rightarrow Ca(NO_3)_2 + 2H_2O$; is an example of i. decomposition reaction ii. double displacement reaction iii. neutralisation reaction iv. single displacement reaction a) i and ii b) ii and iii c) iii and iv d) i and iv	1
3.	Which of the following reactions will **not** take place? a) zinc displacing iron from iron(II) sulfate solution. b) nickel displacing copper from copper(II) nitrate solution. c) copper displacing silver from silver nitrate solution. d) zinc displacing aluminium from aluminium sulfate solution.	1
4.	***The questions below consist of two statements one labeled Assertion (A) and the other labeled Reason (R). Select the correct answer to these questions from the codes (i), (ii), (iii) and (iv).*** ***i) Both A and R are true and R is the correct explanation of the Assertion.*** ***ii) Both A and R are true but R is not the correct explanation of the Assertion.*** ***iii) A is true but R is false.*** ***iv) A is false but R is true.*** **Assertion:** Diffusion is insufficient to meet the oxygen requirements of multicellular organisms. **Reason:** Diffusion is a fast process but only occurs at the surface of the body.	1
5.	**Assertion:** The inner lining of the small intestine has numerous finger-like projections called villi. **Reason:** The villi increase the surface area for absorption.	1

<table>
<tr><td colspan="3">SECCTION B</td></tr>
<tr><td>6.</td><td>4.5 cm needle is placed 12 cm away from a convex mirror of focal length 15 cm. Give the location of image, magnification and height.</td><td>2</td></tr>
<tr><td>7.</td><td>a) State two important observations when quick lime is added to water taken in a beaker.
b) What is the brown coloured gas evolved when lead nitrate crystals are heated in a dry test tube?</td><td>2</td></tr>
<tr><td>8.</td><td>Study the experimental setup given below and answer the following questions:
 

a) Identify the chemical placed at A in the experimental set up X and mention the role played by it.
b) Leaves from which set up will give a positive test for starch and why?</td><td>2</td></tr>
<tr><td colspan="3">SECTION C</td></tr>
<tr><td>9.</td><td>CASE STUDY
Case study question is followed by three sub-questions (a, b and c).
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.
a) What is the position of an image when an object is placed at a distance of 20 cm from a concave mirror of focal length 20 cm?
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?
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.</td><td>3</td></tr>
<tr><td>10.</td><td>What colour change is observed when ferrous sulphate crystals are heated in a dry boiling tube? Name the type of chemical reaction taking place. Write a balanced chemical equation for the reaction.</td><td>3</td></tr>
<tr><td>11.</td><td>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.
a) Given below is a table on the digestive glands and their functions. Complete the Blanks 'A' to 'D'.
<table>
<tr><th>Digestive</th><th>Enzyme</th><th>Function</th></tr>
<tr><td>Salivary</td><td>A) ----------</td><td>B) _____</td></tr>
<tr><td>Gastric</td><td>HCl</td><td>C) ----------</td></tr>
<tr><td>Pancreas</td><td>D) _____</td><td>Protein digestion</td></tr>
</table>
b) Which one has the longest small intestine herbivore or carnivore? Give reason.</td><td>3</td></tr>
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