** SINDHI HIGH SCHOOL, HEBBAL**

**PERIODIC TEST - II (2023-24)**

**SUBJECT – Science**

**Class: 7 Marks: 50**

**Date: 20/12/2023 Reading Time: 8:30 to 8:45 am Number of printed sides: 4 Writing Time: 8:45 to 10:45 am**

***GENERAL INSTRUCTIONS:***

This Question Paper has 5 **Sections A-E**.

1. This question paper consists of 23 questions in 5 sections.

2. All questions are compulsory.

3. **Section A** consists of 12 objective type questions carrying 1 mark each.

4. **Section B** consists of 4 very Short questions carrying 02 marks each. Answers to these

questions should be in the range of 30 to 50 words.

5. **Section C** consists of 4 Short Answer type questions carrying 03 marks each. Answers to

these questions should be in the range of 50 to 80 words.

6. **Section D** consists of 2 Long Answer type questions carrying 05 marks each. Answer to

these questions should be in the range of 80 to 120 words.

7. **Section E** consists of 2 source-based/case-based units of assessment of 04 marks each

with sub-parts.

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|  | **SECTION- A** |  |
| 1. | **Which statement is true for the reflection of light?**  (a) The angle of incidence and reflection are equal.  (b) The reflected light is less bright than the incident light.  (c) The sum of the angle of incidence and reflection is always greater than 900.  (d) The beams of the incident light, after reflection, diverge at unequal angles. | **1** |
| 2. | A diverging mirror is  (a) a plane mirror (b) a convex mirror (c) a concave mirror (d) a shaving mirror | **1** |
| 3. | Which type of mirror always form image behind the mirror?  (a)Plane mirror and convex mirror  (b) Plane mirror and concave mirror  (c) Convex mirror and concave mirror  (d) Plane mirror only | **1** |
| 4. | Which of the following set of substances contain acids?  (a) Grapes, lime water (b) Vinegar, soap  (c) Curd, milk of magnesia (d) Curd, vinegar | **1** |
| 5. | Blue litmus paper is dipped in a solution. It remains blue. What is the nature of the solution?  a) acid or base b) base or neutral  c) acid or neutral d) none of these | **1** |
| 6. | Which of the following chemicals are used to neutralize the basic nature of soil?  a) fertilizer b) slaked lime  c) organic matter d) baking soda | **1** |
| 7. | Identify X in the given equation.    a)  Water                               b) Oxygen  c)  Ethyl alcohol d) Nitrogen | **1** |
| 8 | What is the function of the hair in the nose?  a)  To trap dust particles. b)  To secrete mucus.  c)  To protect the mucus glands. d)  To prevent germs from entering the lungs. | **1** |
|  | **For question numbers 9, 10, 11 and 12, two statements are given- one labelled Assertion (A) and the other labelled Reason (R). Select the correct answer to these questions from the codes (a), (b), (c) and (d) as given below:**  **a) Both A and R are true, and R is correct explanation of the assertion. b) Both A and R are true, but R is not the correct explanation of the assertion. c) A is true, but R is false. d) A is false, but R is true.** |  |
| 9. | **Assertion (A):** Convex mirrors are used in vehicles as rear-view mirrors. **Reason (R)**: A convex mirror has a much larger field of view than a plane mirror   or a concave mirror. | **1** |
| 10. | **Assertion (A):** Sugar is a neutral substance. **Reason (R):** A sugar solution turns red litmus blue. | **1** |
| 11. | **Assertion (A):** Yeast is a single celled organism that can respire aerobically.  **Reason (R):** Yeast is used to make wine and beer. |  |
| 12. | **Assertion (A):** Air is a mixture of many gases and solid particles like dust and   pollen.  **Reason(R):** We often sneeze when we inhale air containing dust particles or   pollen. | **1** |
|  | **SECTION B** |  |
| 13. | Write any two points to differentiate between a real image and a virtual image. | **2** |
| 14. | **Samik went to the dentist as he was suffering from toothache. Nurse handed over a small mouth plane mirror to the dentist for the checkup. Is it a right choice? If not, why? Which mirror will you suggest? Give suitable reason.** | **2** |
| 15. | Observe the figure carefully and answer the following question.  (a) What change do you observe in the test tube?  (b) Which component of the air is being tested?  (c) What is the percentage of the component in the  inhaled and exhaled air? | **2** |
| 16. | Differentiate between breathing and cellular respiration. | **2** |
|  | **SECTION C** |  |
| 17. | Differentiate between a plane mirror, concave mirror and a convex mirror without touching them. | **3** |
| 18. | Give reasons  (a) Great care should be taken while handling laboratory acids and bases.  (b) Solid powder of baking soda does not change the colour of dry litmus paper.  (c) Factory waste is neutralised before disposing it into the water bodies. | **3** |
| 19. | Observe the figures given as A and B and answer the following.a Which of  the figures A or B indicates the process of inhalation and which the  process of exhalation?b In thea) Identify the process in (A) and (B).  b) Write the changes that occur in Ribs and Diaphragm during A and B. | **3** |
| 20. | **Insects and leaves of a plant have pores through which they exchange gases with the atmosphere. Write differences between these pores with respect to their position, number and extension into the body?** | **3** |
|  | **SECTION D** |  |
| 21. | i) Mention any two letters of English alphabet whose image formed in a plane   mirror appears exactly similar to the letters.  ii) Rahul is observing his image in a plane mirror. The distance between the mirror   and his image is 4 m. Find the distance between Rahul and his image, if he   moves 1 m towards the mirror.  iii) The image of an object is formed by two plane mirrors. One of the mirrors is   double the size of the other. In which case will the image be bigger? Why? | **5** |
| 22. | i) What do you observe when phenolphthalein is added to dilute sodium   hydroxide solution taken in a test tube?  ii) If dilute hydrochloric acid is added drop by drop to the same test tube, what   change do you observe?  iii) Identify and define the chemical reaction taking place in the above test tube   with an equation.  iv) Complete the table:   |  |  |  |  | | --- | --- | --- | --- | | INDICATORS | COLOUR CHANGE | | | | **Milk of Magnesia** | **Vinegar** | **Distilled water** | | China Rose | a) \_\_\_\_\_\_\_\_ | b) \_\_\_\_\_\_\_\_\_ | Light pink | | Turmeric | c) \_\_\_\_\_\_\_\_\_\_ | Yellow | d) \_\_\_\_\_\_\_\_\_ | | **5** |
|  | **SECTION E** |  |
| 23. | Acids and bases are two special kinds of chemicals. Almost all liquids are either acids or bases to some degree. Whether a liquid is an acid or base depends on the type of ions in it. If it has a lot of [hydrogen](https://www.ducksters.com/science/chemistry/hydrogen.php) ions, then it is an acid. If it has a lot of hydroxide ions, then it is a base.  i) Differentiate between acids and bases on the basis of:  a) Taste b) Solubility in water.  ii) Name the acids present in the following:  a) Lemon b) Spinach  iii) Name the base found in the following:  a) Window cleaner b) Soap | **2**  **1**  **1** |
| 24. | We need energy to walk, run, climb the stairs and even when we are talking, eating, reading, writing or sleeping. We need this energy to perform all the about activities which maintain our life. We get this energy from the food we eat during the process of respiration, which takes place inside our body all the time. It is not only the human beings who need energy, but all the other animals and plants also require energy.  a) Name the animals which:  i) Breathes only through skin?  ii) Breathes through skin as well as lungs?  b) With a neat labelled diagram, show the organ of respiration in fish.  c) What are the products obtained in the anaerobic respiration:  i) If it takes place in muscles?  ii) If it takes place in yeast? | **1**  **1**  **2** |

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