**SET –B**

Date of Exam: 05-03-2024
Time Allotted: 2 hours                                                      Max. Marks: 40

**(Note: This question paper consists of 3 printed pages. Please check that you have all the pages.)**

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**Q1. Choose the correct answer for the following questions:**                    ( 1 × 5 = 5)

   i. The Moon takes about_____ days to rotate once on its axis.
     A. 30 ½        B. 28½        C. 29½        D. 31½

  ii. A wheel attached to a rod is a _____.
     A. Wedge        B. Pulley        C. Screw        D. Wheel and Axle

 iii. Which among the following has most space between its molecules?
     A. Book        B. Juice        C. Water        D. Carbondioxide

  iv. Twenty-one percent of the air consists of_____.
     A. Oxygen        B. Carbon dioxide  C. Nitrogen        D. Argon.

  v. The given picture shows a simple machine. Identify the simple machine
    shown in the figure.

     A. Wheel and axle        C. Pulley
     B. Wedge             D. Screw
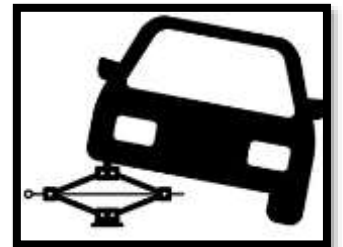


**Q2. There are two statements marked as Assertion (A) and Reason(R).**
**Choose the correct answer from the options given and write the correct option**
**for the following:**                                                      (1 × 2 = 2)

A) Both statements Assertion (A) and Reason (R) are true and Reason(R) is the correct explanation of Assertion(A).

B) Both statements Assertion (A) and Reason (R) are true and Reason(R) is not the correct explanation of Assertion (A).

C) Statement Assertion (A) is true and Reason (R) is false.

D) Statement Assertion (A) is false and Reason (R) is true.

  i. **Assertion(A):** There is no life on Moon.
   **Reason(R):** Moon does not have an atmosphere.

  ii. **Assertion(A):** Carbon dioxide is used to fill electric bulbs.
   **Reason(R):** Carbon dioxide is essential for photosynthesis

**Q3. Answer the following in one word:** $(½ × 4 = 2)$

    i. The building blocks of matter_____

    ii. The branch of science that deals with the study of celestial bodies _____

    iii. The surface of the moon is covered with huge pits called_____

    iv. Water that is fit for consumption is known as_____.

**Q4. Give two examples for each of the following:** $(1 × 2 = 2)$

    i. Immiscible liquids    ii. Indian satellites

**Q5. Correct and rewrite the following statements by changing the highlighted words:** $(1 × 2 = 2)$

    i. A **lever** has two inclined planes put together.

    ii. **Yuri Gagarin** was the first man to step on the Moon.

**Q6. Give reason for the following statements:** $(1 × 2 = 2)$

    i. CFCs are disastrous for mankind.

    ii. Compared to the Earth, the Moon is extremely hot during the day and freezing cold at night.

**Q7. Define the terms:** $(1 × 3 = 3)$

    i. Pulley        ii. Filtrate        iii. Solutes

**Q8. Answer the following questions in brief (Any five)** $(2 × 5 = 10)$

    i. Explain how the arrangement of molecules differs in ice and water vapour.

    ii. Describe how the atmosphere acts as a shield against harmful UV rays and meteoroids. What would happen if there were no atmosphere to protect us from these dangers?

    iii. State two differences between high tides and low tides.

    iv. Change of state occurs due to heating. Explain how a liquid change into a gas on heating.

    v. Mention the applications of artificial satellites in the field of weather forecasting and communication.

    vi. Explain first and third class levers with the help of neat labelled diagrams.

    vii. Explain the solubility of gases in liquids with two examples.
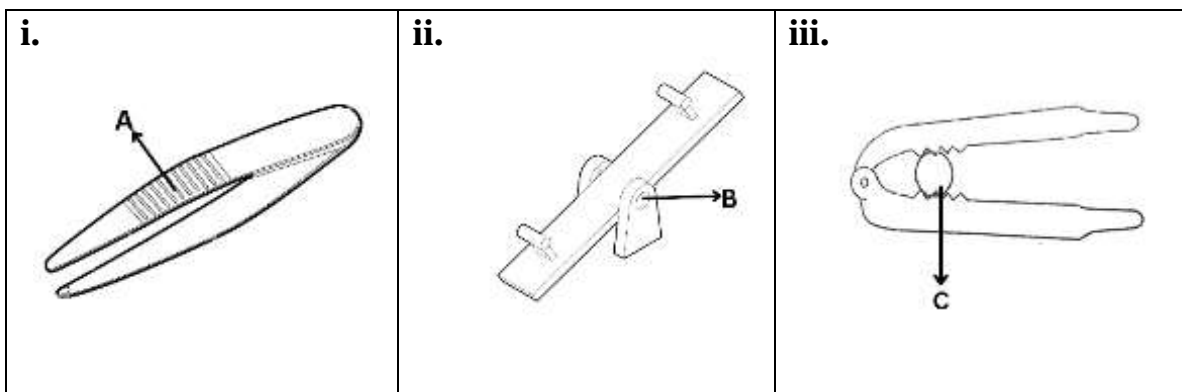
**Q9. Answer the following questions:**

    i. How does an eclipse occur?                                        **(3 × 1 = 3)**

    ii. Differentiate between total and partial lunar eclipse.

    iii. Draw a well labelled diagram of total lunar eclipse.

**Q10.** Observe the picture carefully, and answer the following questions.    **( 3 × 1 = 3)**



    i.  Identify the simple machine that is used in unloading the boxes from the vehicle.

    ii. What is the function of the simple machine which is used in unloading?

    iii. Mention two more examples of this type of simple machine.

**Q11.** In the given pictures below, identify the parts of the lever **A, B** and **C** and define them.    **( 3 × 1 =3)**

| i. | ii. | iii. |
|---|---|---|
|  |  |  |

**Q12. Read the passage given below and answer the following questions: ( 3 × 1 = 3)**

Water is the precious resource on the planet. Dust, fine sand, clay, dirt, and bacteria, viruses, microbes are examples of impurities present in water. Pure water has no taste, colour or odour, but water from rainfall, streams, and wells is known to contain impurities. Similarly, many drinking water systems contain chlorine as well as high calcium levels. If consumed, impurities in water can cause a variety of medical ailments and illnesses.

    i. Why is it important to remove impurities from water before using it?

ii. Name the two types of impurities present in water.
iii. Explain any two methods to remove germs from water.