State Council of Educational Research and Training, Maharashtra, Pune 30 Preparatory Bridge Course Pre-Test

Class : X

Subject: Science & Technology 01

Marks : 12 Time: 30 Mins

Note: 1) All questions are compulsory.

2) The number to the right of the questions indicates marks.

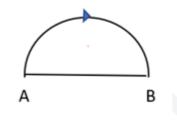
3) Draw the exact, well labeled diagrams wherever necessary.

4) For each multiple choice question, only the correct option number should be written.

Q. 1) Solve the following questions. (Any Three)

2 Marks each

1) Every morning Swarali walks around the edge of a semicircular field having a radius of 'r' m. As shown in figure if she starts from point A and ends at point B what is the ratio of the distance she walked and her displacement?



2) Give scientific reason.

Valency is always a whole number.

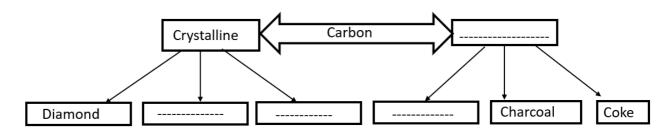
3) Classify the following acids into weak acids and strong acids.

H₂CO₃, HNO₃, HCl, CH₃COOH.

4) If the mirrors are kept parallel to each other, how many images will found in the mirror?

 $n = \square - 1$ $n = \square$

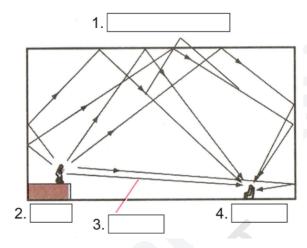
5) Complete the following flow chart.



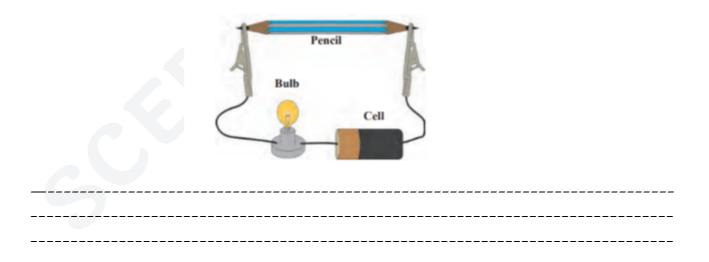
Q. 2) Answer the following questions. (Any Two)

3 Marks each

1) Identify the following picture and label the numbered part.



2) What will happen if an electric current is flown in the circuit in the given experiment? Which material is present in the pencil? Which property of the material is found in the experiment?



3) What is meant by water of crystallization? Give examples of salts with water of crystallization, and their uses.

4) Draw symbols of the following components and write their uses.

Components	symbols	Uses
1) Resistance		
2) Voltmeter		
3) Electric bulb		

5) Explain in which of the following cases the work done by the force is positive work, negative work or zero work.

1. Pushing a stalled vehicle

2. Tying a stone to one end of a string and swinging it round and round by the other end of the string.

3. Catching a ball thrown by a friend.