

## K12 ASPIRE

The Center of Learning Excellence

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## CLASS X CBSE SCIENCE TEST SERIES PAPER 2

Topics Covered

Periodic classification of elements  
Heredity and Evolution  
Sources of Energy  
Acids, Bases and Salts

### Very short answer type questions ( 1 mark each )

1. Give three key factors of the modern concept of evolution.
2. Equal volumes of hydrochloric acid and sodium hydroxide solutions of same concentration are mixed and the pH of the resulting solution is checked with a pH paper. What colour would be obtained ?
3. Out of Li, C and N, which forms the most basic oxide and which forms the most acidic oxide?
4. Elements have been arranged in the sequence – F, Na, Mg, Al, Si, P, S, Cl, Ar, K. Which law of classification of elements does this sequence belong to?
5. What is the minimum wind velocity required for obtaining useful energy with a windmill?

### Short answer type I questions ( 2 marks each )

6. Why is bio – gas considered an ideal fuel for domestic use?
7. The pH of soil A is 7.5 while that of soil B is 4.5. Which of the two soils should be treated with powdered chalk to adjust its pH and why?
8. What happens when nitric acid is added to an eggshell?

### Short answer type II questions ( 3 marks each )

9. Properties of the elements are given below. Where would you locate the following elements in the periodic table ?
  - a) A soft metal stored under kerosene
  - b) An element with variable ( more than one ) valency stored under water
  - c) An element whose thin oxide layer is used to make other elements corrosion resistant by the process of “anodising”
10. A change in DNA that is useful for one property to start with, can become useful later for a different function. Explain.

11. Identify the elements with the following property and arrange them in increasing order of their reactivity.

- a) An element which is a soft and reactive metal
- b) The metal which is an important constituent of limestone
- c) The metal which exists in liquid state at room temperature

**Long answer type questions ( 5 marks each)**

12. a) Why does an aqueous solution of an acid conduct electricity ?.

b) Which has a higher pH value : concentrated or dilute solution of HCl ?

c) Write chemical equation to represent the action of atmospheric CO<sub>2</sub> gas on bleaching powder when left exposed in open .

13. a) Give three reasons why bio – gas is considered to be a boon to the farmers.

b) How is nuclear energy generated during nuclear fusion ?

14. a) Why offsprings differ from parents in certain characters ?

b) Define the terms : a) Sex chromosomes , b) Analogous organs

15. On the basis of the trends in the periodic table, answer the following about the elements with atomic numbers 3 to 9.

a) Name the most electropositive element among them

b) Name the most electronegative element among them

c) Name the element with the smallest atomic size

d) Name the element which is a metalloid

e) Name the element which shows maximum valency