CBSE TEST PAPER 01

CLASS XI CHEMISTRY (The p-Block Elements)

General Instruction:

- All questions are compulsory.
- Marks are given along with each question.

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1. How many groups are there in p-block? [1]

2. What is inert pair effect? [1]

3. How does metallic and non-metallic character vary in a group? [1]

4. Why do third period elements of p-groups can expand their covalence above four? [1]

5. What type of π–bonds are formed by heavier elements in p-block? [1]

6. Why the elements of group 13 are called p-block elements? [2]

7. The elements B, Al, Ca, In and Tl are placed in the same group of the periodic table. Give reason. [1]

8. In which block of the periodic table, metalloids and non–metals exist? [1]

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[ANSWERS]

Ans 1. There are six groups in p-block, numbering from 13 to 18.

Ans 2. The tendency of the ns^2 valence electrons of metallic elements to remain unionized or unshared is known as inert pair effect.

Ans 3. The metallic character increases and non-metallic character decreases down the group.

Ans 4. The third period elements of p-groups can expand their covalence above four due to presence of vacant 3d orbitals.

Ans 5. The heavier elements of p-block can form dπ- pπ or dπ- dπ type of π bonds.

Ans 6. Group 13 elements are called p-block elements because the valence shell electronic configuration of the elements is ns^2 np^1 and the last electron enters the p-orbital.

Ans 7. The elements B, Al, Ga, In and Tl are placed in the same group of the periodic table because they have same valence shell electronic configuration ns^2 np^1.

Ans 8. The non-metals and metalloids exist only in the p-block of the periodic table.