

# Science

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(Chapter – 5) (Periodic Classification of Elements)

(Class – X)

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## Question 1:

Use Mendeleev's Periodic Table to predict the formulae for the oxides of the following elements: K, C, Al, Si, Ba.

## Answer 1:

K is in group 1. Therefore, the oxide will be  $K_2O$ .

C is in group 4. Therefore, the oxide will be  $CO_2$ .

Al is in group 3. Therefore, the oxide will be  $Al_2O_3$ .

Si is in group 4. Therefore, the oxide will be  $SiO_2$ .

Ba is in group 2. Therefore, the oxide will be  $BaO$ .

## Question 2:

Besides gallium, which other elements have since been discovered that were left by Mendeleev in his Periodic Table? (any two)

## Answer 2:

Scandium and germanium

## Question 3:

What were the criteria used by Mendeleev in creating his Periodic Table?

## Answer 3:

Mendeleev's periodic table was based on the observation that the properties of elements are a periodic function of their atomic masses. This means that if elements are arranged in the increasing order of their atomic masses, then their properties get repeated after regular intervals.

## Question 4:

Why do you think the noble gases are placed in a separate group?

## Answer 4:

Noble gases are inert elements. Their properties are different from the all other elements. Therefore, the noble gases are placed in a separate group.

