

# INDIAN SCHOOL MUSCAT

## QUESTION BANK

### CLASS 10

#### PERIODIC CLASSIFICATION OF ELEMENTS

- 1 Define modern periodic law
- 2 What property do the elements of the same group have in common?
- 3 What was the basis of classification of elements according to Mendeleev and according to Modern periodic table?
- 4 Why does the reactivity of group 1 elements increase down the group?
- 5 How could the modern periodic table remove the anomalies of Mendeleev's table?
- 6 Why is atomic number considered as a better basis for classification than atomic mass?
- 7 List the demerits of Doberiener's triads.
- 8 What were the limitations of Newland's law of octaves?
- 9 Define ionization energy, electron gain enthalpy
- 10 How does the valency of elements vary across the period and down a group?
- 11 What is the reason for the decrease in size of the atom across the period?
- 12 A metal X is in the first group of the periodic table. What will be the formula of its oxide?
- 13 An element Y is in the second period and the 16<sup>th</sup> group  
Is it a metal or a non-metal?  
What is its valency?
- 14 How does electronegativity vary down a group of Halogens?
- 15 Explain why
  - a) All elements of a group have similar chemical properties.
  - b) All elements of a period have different chemical properties
- 16 State all the demerits of Mendeleev's periodic table?
- 17 The elements X, Y and Z belong to groups 2, 14 and 16 respectively

a) Which two elements will form covalent bond

b) Which two elements will form an ionic bond?

18 An element A has an atomic number of 6. Another element B has 17 electrons in its neutral atom.

a) In which groups would you find these elements?

b) What type of bond is formed between A and B?

c) Suggest a formula of the compound between A and B.

19 An element has electron structure of 2,7

a) What is the atomic number of this atom?

b) To which of the following would it be chemically similar?

${}^7\text{N}$   ${}_{15}\text{P}$   ${}_{17}\text{Cl}$   ${}_{18}\text{Ar}$

c) Why would you expect it to be similar?

20 The atomic numbers of three elements are given below.

Element	Atomic number
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A	5
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B	7
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C	10
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a) Which element belongs to group 18, 13 and 15?

b) To which period do these elements belong?