

Periodic Table, Periodic Properties and Variation of Properties

1hr.

- ① (i) State Modern Periodic law.
(ii) Name the scientist who stated the law.
(iii) How many groups and periods does periodic table have?
- ② Name the (i) metals (ii) metalloids and (iii) non-metals in the first twenty elements.
- ③ Complete the following sentences choosing the correct word or words from those given in brackets at the end of each sentence.
 - (i) The properties of the elements are a periodic function of their _____ (atomic number, mass number, relative atomic number).
 - (ii) Moving across a _____ of the periodic table the elements ~~of~~ their show increasing _____ character (group, period, metallic, non-metallic).
 - (iii) The elements at the bottom of a group would be expected to show _____ metallic character than the element at the top (less, more).
 - (iv) The similarities in the properties of a group of elements are because they have the same _____ (electronic configuration, no. of outer electrons, atomic number).
- ④ ~~The no. of electrons~~ .

4) a) Among the elements given below, the element with the least electronegativity is

(i) Lithium

(ii) Carbon

(iii) Boron

(iv) Fluorine.

(b) The metals of group 2 from top to bottom are Be, Mg, Ca, Sr and Ba.

(i) Which of these elements will form ions most readily and why?

(ii) State the common feature in the electronic configuration of all these elements.

5) a) Metals are good _____ (oxidising / reducing agent) because they are electron _____ (acceptor / donor).

b) An element with at. no 19 will most likely combine chemically with the elements whose at. no is

(i) 17

(ii) 11

(iii) 28

(iv) 20

(c) Rewrite the following statements by using the current symbol > (greater than) or < (less than) in the blank given,

(i) The ionization potential of potassium is _____ that of sodium.

(ii) The electronegativity of iodine is _____ that of chlorine.

(d) Fill ~~the~~ in the blanks by selecting the ~~current~~ correct word from the brackets.

(i) If an element has a low ionization energy then it is likely to be _____ (metallic / non-metallic)

(ii) If an element

(ii) If an element has seven electrons in outermost shell then it is likely to have the _____ (largest/smallest) atomic size among all the elements in the same period.