

Model Question Paper
Periodic Classification - II - Part V

12th Standard

Chemistry

Reg.No. :

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I. Answer all the questions.

II. Use Blue pen only.

III. Question No 15 is compulsory

Time : 01:15:00 Hrs

Total Marks : 60

5 x 1 = 5

Section-A

- 1) In the compound XY, the electronegativity values of X and Y are 2.1 and 3.8 respectively then the nature of the bond between X and Y is
(a) predominantly ionic (b) predominantly covalent (c) 50% ionic 50% covalent (d) completely covalent
- 2) Electronegativity values of the elements are used to predict
(a) bond order (b) atomic radius (c) ionisation energy (d) polarity of the bonds
- 3) The effective nuclear charge in k^+ ion is
(a) 5.75 (b) 7.75 (c) 8.35 (d) 9.35
- 4) The electronegativity values of A and B are 1.1 and 2.8 respectively, then the molecule AB can be represented as
(a) $A^{\delta+}B^{\delta-}$ (b) $A^{\delta-}B^{\delta+}$ (c) A-B (d) A^+B^-
- 5) The electron affinity of alkaline earth metals is
(a) zero (b) negative (c) positive (d) infinitive

Section-B

10 x 3 = 30

- 6) How will you measure the effective nuclear charge of the last electron in an atom whose electronic configuration is $1s^2 2s^2 2p^6 3s^2 3p^5$
- 7) Why is ionisation energy of Be greater than that of B?
- 8) Name the factors affecting electron affinity?
- 9) Arrange the following in the increasing order of size Ca^{2+} , S^{2-} , Cl^- and K^+
- 10) Arrange the following in the decreasing order of size Sn, Sn^{2+} & Sn^{4+}
- 11) Arrange the following in the increasing order of size Cl , Cl^- & Cl^+
- 12) Among K and Ca which has higher ionisation energy why?
- 13) Compare the ionisation energy of 'F' and 'Cl'.
- 14) Compare the ionisation energy of 'I' and 'Br'.
- 15) a) Compare the ionisation energy of 'Ca' and 'Be'.

(OR)

- b) Compare the ionisation energy of 'Cl' and 'I'.

Section-C

5 x 5 = 25

- 16) Explain Pauling's method to determine ionic radii.
- 17) Explain any three factors which affect the ionisation energy.
- 18) Explain the various factors that affect electron affinity.
- 19) How do electronegativity values help to find out the nature of bonding between atoms?
- 20) Explain how electronegativity values help to find out the percentage of ionic character in polar covalent bond.
