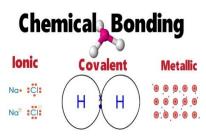
National Institute of Open Schooling Senior Secondary Course: Chemistry Chapter 4: Chemical Bonding Worksheet-4



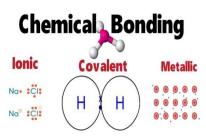
- 1. Refer the modern periodic table and answer the following questions.
- (i) The elements placed in group number 18 are called......
- (ii) Alkali and alkaline earth metals are collectively calledblock metals.
- (iii) The general configuration for halogens is......
- (iv) Name a p-block element which is a gas other than a noble gas or a hologen.
- (v) Name the groups that comprise the 's' block of elements.
- (vi) Element number 118 has not yet been established, to which block, will it belong?
- (vii) How many elements should be there in total if all the 7s, 7p, 6d and 5f, blocks are tobe full?
- 2. Describe the variation of electron gain enthalpy and ionization enthalpy in the periodic table.
- 3. Which one have lower first ionization enthalpy and why?
 - i) Na or Ca ii) K or Ar iii) Na⁺ or Na
- 4. Which one have high electron gain enthalpy and why?
 - i) O^- or O^{2-} ii) O^- or S iii) N^- or P
- 5. Define the following:
 - (a) Electron gain enthalpy (b) Ionization enthalpy (c) Ionic radius
 - (d) Electronegativity.

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- 6. What is electronegativity? How is it related to the type of bond formed?
- 7. Why is the electron gain enthalpy of Cl more in negative value as compared to that of F?
- 8. Define ionic radii. Arrange these ionic species in order of decreasing ionic radii.

- 9. Explain Why
 - i) First ionization enthalpy of N is more than O.
 - ii) Second electron gain enthalpy of O is negative.
 - iii) All transition elements are d-block elements but all d-block elements are nottransition elements.
 - iv) N has positive electron gain enthalpy but O has negative electron gain enthalpy.

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10. Pl consider this part of periodic table and answer below given questions

Group Period	1	2	d-block Elements	13	14	15	16	17	18
2		A			M	F	G	X	
3	В							Y	
4	R		S					Z	
5	0			D					
6			4						Q

- i) Which one may be a transition element?
- ii) What is the Family name of elements, XYZ?
- iii) Which one is most reactive Metal?
- iv) Which one is most reactive non metal?
- v) Which one is also known as chalcogens?
- vi) Which one is alkali metal?
- vii) Which one is alkaline earth metal?
- viii) What is the valency of Q, X, N & P?
- ix) What is the formula of compound formed by reaction of A & F?
- x) Which one has smallest and which one has biggest size?

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