



مدرسة جيه اس اس الخاصة
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Lesson 5 - Class Test
Periodic classification of Elements. Date: 01/11/20

1. (i) ~~Group 17~~ Group 17
 - (ii) Group ~~17~~ 17
 - (iii) Group 1
 - (iv) Group ~~1-16~~ 1 - 16
 - (v) Group 18, they are noble gases
2. (i) The atomic size increases down the group as the number of shells increases.
 - (ii) Metal have the tendency to lose electrons and form a ^{positive} ~~negative~~ ion, therefore they are electropositive in nature.
 - (iii) Cl is smaller than Ar, this is because they are in the same period and along the period, atomic size decreases.
 - (iv) ^{the same} ~~same~~ period and atomic size decreases along the period.
 - (v) Cl is more electronegative. It has an atomic number of 17 and 7 valence electrons and hence ^{tends to} ~~can~~ gain an electron to complete octet. This is not the case with ~~same~~ F
3. (i) Lithium (Li) ~~Li~~ and Sodium (Na)
 - (ii) Beryllium (Be) and Calcium (Ca)
 - (iii) Neon (Ne) and Argon (Ar)
 - (iv) ~~Fluorine~~ ^{Fluorine} (F) and Chlorine (Cl)
 - (v) Carbon (C)

4.

- (i) The atomic size decreases across the period, this is because the number of valence electrons increases which increases the ~~nuclear~~ Effective Nuclear charge ~~between~~ between protons and electrons.
- (ii) Group 1 has the largest atomic size. This is because the atomic size decreases along the period. Group 1 elements are before group 17 elements in a period.
- (iii) Group 17 ~~are~~ are smallest in size. This is because these elements come after group 1 elements and atomic size decreases across the group.
- (iv) The number of ^{valence} electrons increases and hence the Effective Nuclear charge between protons and electrons increases. Due to this strong nuclear ~~nuclear~~ attraction, atomic size decreases along the period.
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