

s block
Valence electronic configuration
ns^{1-2}

p block
Valence electronic configuration:
ns^2np^{1-6}

d block
Valence electronic configuration
$ns^2 (n-1)d^{1-10}$

Question 1:

By referring to the electronic configuration of each element below:

***A* : $1s^2\ 2s^2\ 2p^6\ 3s^2\ 3p^6\ 3d^{10}\ 4s^2\ 4p^5$**
***B* : $1s^2\ 2s^2\ 2p^6\ 3s^2\ 3p^6\ 3d^3\ 4s^2$**
***C* : $1s^2\ 2s^2\ 2p^6\ 3s^2\ 3p^6\ 4s^2$**
***D* : $1s^2\ 2s^2\ 2p^6\ 3s^2$**
***E* : $1s^2\ 2s^1$**

(a) State the period, group and block for each element.

Elements	Period	Block	Valence electron	Group	Ion
A					A
B					B
C					C
D					D
E					E

(b) State how the elements ***A*** to ***E*** are arranged in the periodic table?

The elements are arranged in the order of _____

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(c) Why are elements ***C*** and ***D*** in the same group?
Both elements C and D have the same number of _____.

(d) Why are elements ***A*** and ***C*** in the same period?
Both elements A and C have the same _____.

(e) Between C and D, which is one of the elements is more electronegative?

_____.

Remember!

Size of atom $\propto \frac{1}{\text{electronegativity}}$

(f) Between A and C, which is one of the elements is more electronegative?

_____.

(g) Between C and D, which one of the elements has higher first ionization energy?

_____.

Remember!

size of atom $\propto \frac{1}{IE_1}$

(h) Between A and C, which elements has higher first ionization energy (IE1)?

_____.

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