

Chemistry December's exam:

Question One

(a) Write the atomic number and the electronic configuration of each of the following

.A representative element located in Period 2, Group 5A

.A noble gas located in Period 3

.A transition element located in Period 4, Group 5B

.A representative element located in Period 5, Group 7A

Question Two

(b) Give reasons for the following

The atomic radius cannot be determined as the distance between the nucleus and the outermost electron

The ionization energy of phosphorus is greater than that of sulfur, although sulfur comes after phosphorus in the same period

It is difficult to obtain the ion from the element located in Period 3, Group 1A

.The electron affinity values of beryllium and magnesium are positive

.The electron affinity value of nitrogen is positive

.The electron affinity values of noble gases are positive

The highest released energy values are found in halogens (Group 7A)

Question Three

(c) Write balanced symbolic equations to illustrate the following



- .Dissolving sulfur trioxide gas in water
- .Showing that carbon dioxide is an acidic oxide
- .Dissolving potassium oxide in water
- .Showing that sodium oxide is a basic oxide
- .The reaction of sodium oxide with hydrochloric acid
- .Showing that zinc oxide is an amphoteric oxide

