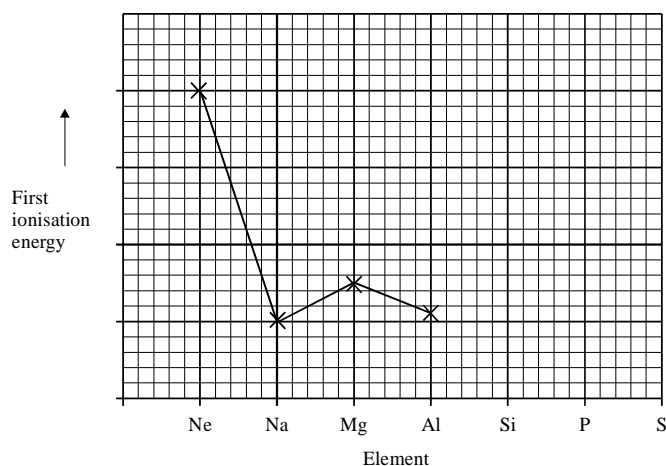


1.4 – PERIODICITY – PPQ1



Name Form

- 1) The diagram below shows the trend in the first ionisation energies of the elements from neon to aluminium.



- a) Draw crosses on the graph to show the first ionisation energies of silicon, phosphorus and sulphur. (3)

- b) Write an equation to illustrate the process which occurs during the first ionisation of neon. (1)

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- c) Explain why the first ionisation energy of neon and that of magnesium are both higher than that of sodium.

Explanation for neon

.....

.....

Explanation for magnesium

.....

..... (4)

- d) Explain why the first ionisation energy of aluminium is lower than that of magnesium.

.....

.....

..... (2)

- e) State which one of the elements neon, sodium, magnesium, aluminium and silicon has the lowest melting point and explain your answer in terms of the structure and bonding present in that element.

Element with lowest melting point

Explanation

.....

..... (3)

- f) State which one of the elements neon, sodium, magnesium, aluminium and silicon has the highest melting point and explain your answer in terms of the structure and bonding present in that element.

Element with highest melting point

Explanation

.....

..... (3)