a) The term species is sometimes used to refer to neutral atoms and to positive and negative ions.

The table shows the numbers of subatomic particles in eight different species.

Species	Number of protons	Number of neutrons	Number of electrons
A	5	5	5
B	5	6	5
C	6	7	5
D	6	7	7
E	7	7	7
F	7	7	10
G	8	8	10
H	8	10	10

(i) Explain which two letters represent neutral atoms of the same element.

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(ii)Explain which two letters represent negative ions formed from the same element.

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(iii) Explain which letter represents the atom with the lowest mass number.

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(iv) What is the electronic configuration of species E?

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- **Use the the Periodic Table on page 2 to answer this question.**

(i) The symbol for silver is

A Ag **B** As **C** S **D** Si

(ii) The element with an atomic number of 40 is

A Al **B** Ar **C** Ca **D** Zr

(b) An atom of an element has the electronic configuration 2.8.3

(i) State the number of the group in the Periodic Table in which this element is found.

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(ii) Explain your answer in terms of the atom's electronic configuration.

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(iii) State the number of the period in the Periodic Table in which this element is found.

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(iv) Explain your answer in terms of the atom's electronic configuration.

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(v) Identify the element.

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