

1

SMART EXAM RESOURCES
9701 CAMBRIDGE AS CHEMISTRY
TOPIC QUESTIONS AND MARK SCHEMES
TOPIC :ATOMIC STRUCTURE
SUB-TOPIC: ISOTOPES
SET-2-QP-MS

1

Potassium also has two stable isotopes. Both isotopes have the same chemical properties.

(i) Explain why both isotopes of potassium have the same chemical properties.

.....
..... [1]

MARK SCHEME:

2

they have the same electron arrangement / electronic configuration	1
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2 Atoms with nuclei containing an odd number of protons tend to have fewer isotopes than those with an even number of protons.

(a) Gallium has two stable isotopes, ^{69}Ga and ^{71}Ga .

(i) Complete Table 1.1 to show the numbers of protons, neutrons and electrons in the two stable isotopes of gallium.

Table 1.1

isotope	number of protons	number of neutrons	number of electrons
^{69}Ga			
^{71}Ga			

[2]

MARK SCHEME:

4

columns 1 & 3 identical

1

<i>isotope</i>	<i>No of p's</i>	<i>No of n's</i>	<i>No of e's</i>
^{69}Ga	31	38	31
^{71}Ga	31	40	31