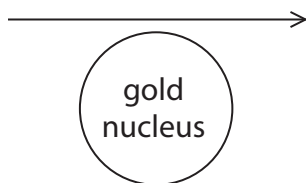
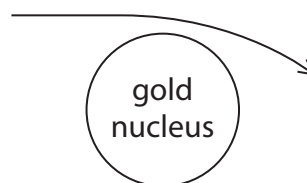
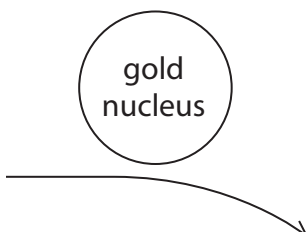
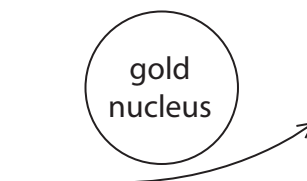


**Answer ALL questions.****1 (a)** Which of these is an electron?**(1)**

- ☐ **A** an x-ray
- ☐ **B** a gamma ray
- ☐ **C** an alpha particle
- ☐ **D** a beta particle

**(b) (i)** Which of these will repel an alpha particle?**(1)**

- ☐ **A** a nucleus
- ☐ **B** an electron
- ☐ **C** a gamma ray
- ☐ **D** a neutron

**(ii)** Which of these could be the path of an alpha particle passing very close to a gold nucleus?**(1)****A****B****C****D**

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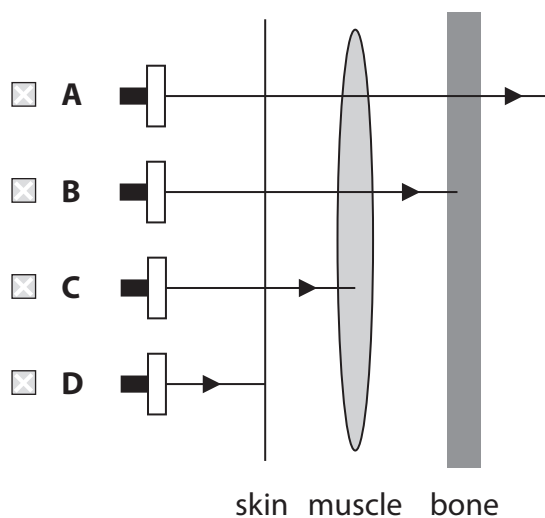
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(iii) The diagram shows how the different parts of the body affect the radiation from four radioactive sources, A, B, C and D.

Which source only emits alpha particles?

(1)



(iv) Which of these properties is the reason for using alpha particles in a smoke detector?

(1)

- ☐ A high ionising ability
- ☐ B low mass
- ☐ C short half-life
- ☐ D long range

(Total for Question 1 = 5 marks)

