

**Marks**  
**3**

- A solution of sodium iodide containing the radioisotope  $^{131}\text{I}$  has an activity of  $20 \text{ mCi L}^{-1}$  when freshly prepared. Fifteen days later, a patient is given  $0.50 \text{ mL}$  of this solution. Calculate the dose of  $^{131}\text{I}$  (in microcurie,  $\mu\text{Ci}$ ) received by the patient. The half-life of  $^{131}\text{I}$  is  $8.04 \text{ days}$ .

Answer: