

Movement in and out of the Cells

Question Paper

Level	IGCSE
Subject	Biology
Exam Board	CIE
Topic	Movement in and out of Cells
Sub-Topic	
Paper Type	Alternative to Practical
Booklet	Question Paper

Time Allowed: 23 minutes

Score: /19

Percentage: /100

- 1 Two uncooked hen's eggs of similar size were submerged in acid to dissolve the shell. The contents of the eggs are left intact, enclosed by the egg membrane.

One de-shelled egg has been placed in distilled water for 2 days. The other egg has been placed in salt solution for 2 days.

Fig. 1.1 shows the two eggs after two days.

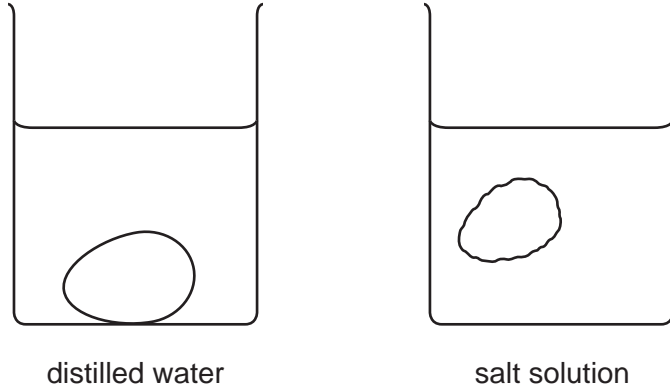


Fig. 1.1

- (a) (i) Complete Table 1.1 to compare the two eggs.

Table 1.1

	egg in water	egg in salt solution
size of the egg		
position in the liquid		
external appearance of the egg		

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- (ii) Suggest an explanation for these differences.

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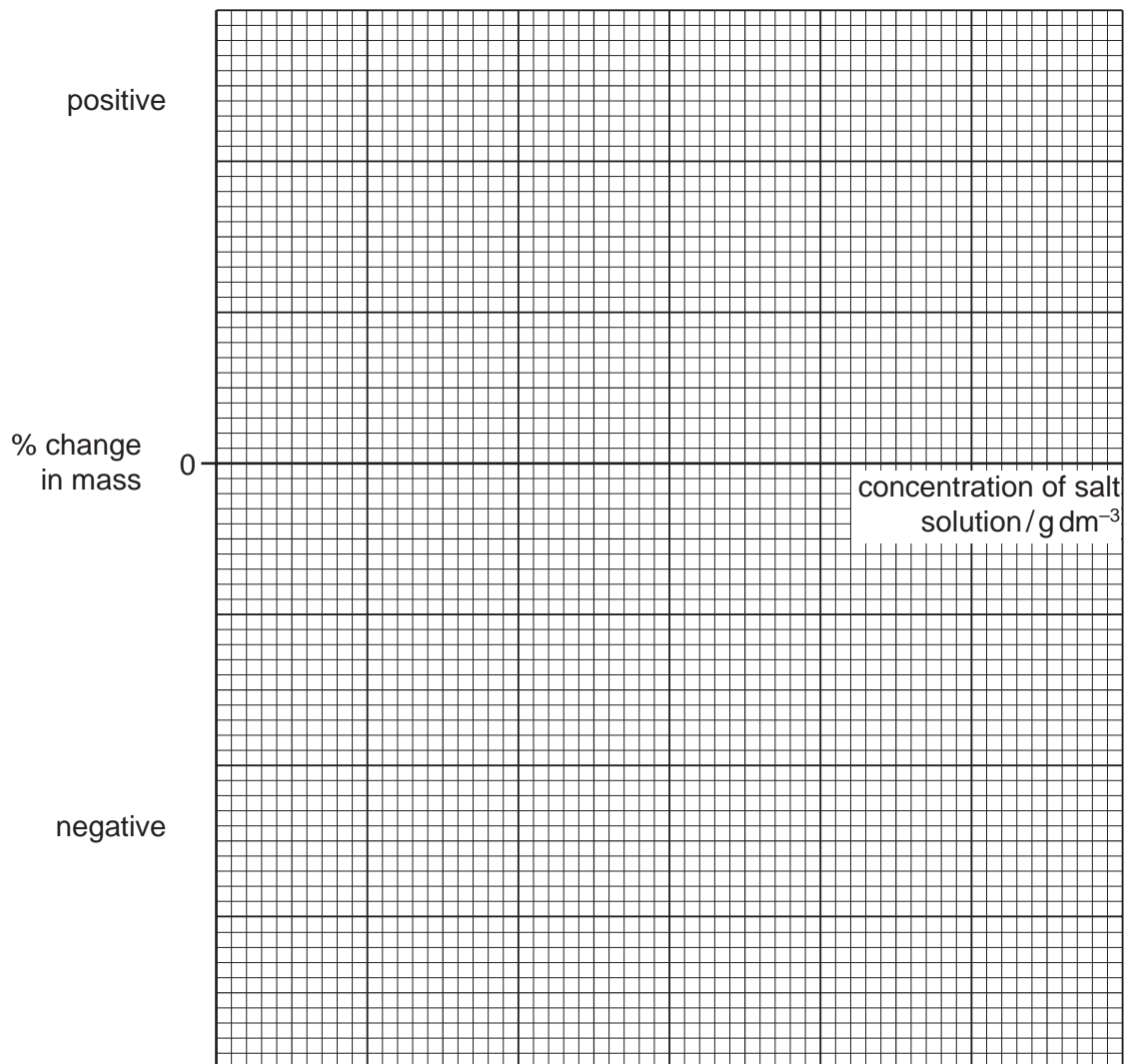
- (b) A student carried out a similar experiment and varied the concentration of salt in different solutions.

Table 1.2 shows the percentage change in mass of the eggs after 2 days.

Table 1.2

concentration of salt solution / gdm ⁻³	% change in mass
0.0	+7.3
10.0	+3.2
20.0	+0.8
30.0	-2.5
40.0	-6.4
50.0	-10.8

- (i) Draw a graph of this data on the axes.



(ii) Determine the concentration of salt solution where there is no change in mass.

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(iii) Explain why there is no change in mass at this concentration of salt solution.

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(c) Describe a food test which might show whether there is more protein to be found in the 'white' or in the 'yolk' of the egg.

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[Total: 19]