

1. You are provided with specimens A, B and solution Q.  
Peel specimens A and B.  
Cut four cubes from specimen A, each measuring  $1\text{ cm} \times 1\text{ cm} \times 1\text{ cm}$ .  
Also cut one cube from specimen B of the same size.  
Carry out the procedure below.
- Cut one of the cubes of A into four equal pieces.
  - Cut the second and third cube, each into eight equal pieces.
  - Leave the fourth cube intact.
  - Cut the cube of specimen B also into eight equal pieces.
  - Label the boiling tube as  $A_1$  and four test tubes as  $A_2$ ,  $A_3$ ,  $A_4$  and  $A_5$ .
  - Boil the eight pieces cut from the third cube of A in  $5\text{ cm}^3$  of water for 5 minutes. (keep the pieces of each cube separate)
  - Measure and add  $5\text{ cm}^3$  of solution Q to the boiling tube and to each of the test tubes  $A_2$  to  $A_5$ .

- (a) To each test tube and boiling tube, add the cut cubes as indicated in table 1 below.

Record your observations and deductions

(10 marks)

TABLE 1

Test tube/ Boiling tube	Contents	Observations	Deductions
$A_1$	Q + intact cube of A		
$A_2$	Q + four pieces of A		
$A_3$	Q + eight fresh pieces of A		
$A_4$	Q + eight boiled pieces of A		
$A_5$	Q + eight Pieces of B		

(b) Explain the difference in your results in test tubes;

(i)  $A_1$  and  $A_2$

(02 marks)

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(ii)  $A_3$  and  $A_4$

(02 marks)

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(iii)  $A_3$  and  $A_5$

(02 marks)

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(c) State what was being investigated in this experiment.

(03 marks)

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(d) State the role of specimen A and B in the experiment.

(01 mark)

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You are provided with specimens K and L which are animal structures.

(a) With reasons, state the identity of the animal structures.

Identity; \_\_\_\_\_ (01mark)

Reasons; \_\_\_\_\_ (02 marks)

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**Turn Over**