



Question 1

$$\frac{81}{81} = 100\%$$

Question 1

15 marks

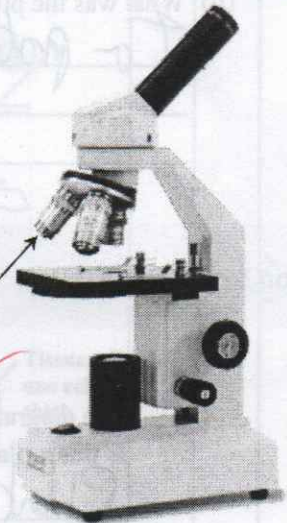
All biological organisms are made up of cells.

- (a) Name the instrument shown in the picture on the right, which is used to examine cells.

Microscope

- (b) Name the labelled part of the instrument, which makes the cells look bigger.

Objective lens

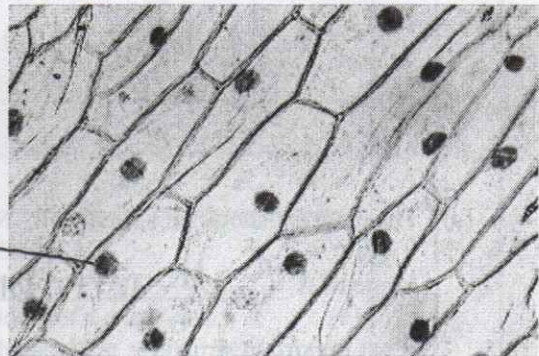


- (c) The picture below shows cells from an onion, which are typical plant cells.

In the box, write the name of any one part of the cell.

Draw an arrow from the box to the part of the cell you have named.

Nucleus



- (d) State the function of the part of the cell you have chosen.

The nucleus controls the cell

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Question 2

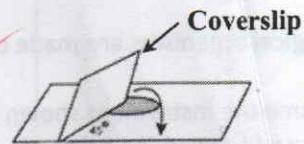
(g) A student used an onion to prepare a slide from plant tissue.

(i) Name the stain used to see the onion cells more clearly.

Iodine

(ii) What was the purpose of the coverslip?

To protect the microscope



Question 3

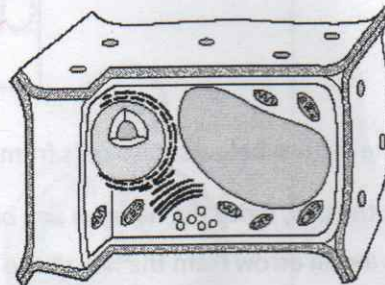
(a) The diagram shows a sketch of a cell.

Is this a plant cell or an animal cell?

Plant cell

Give a reason for your answer.

It has a large vacuole



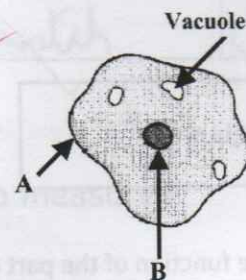
Question 4

(e) The diagram shows an animal cell. Name part A.

Name of A Cell membrane

What important structures are located in B?

What? Chromosomes



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(1)

(2)

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Question 5

(b) The diagram shows a laboratory microscope.

- (i) What are the **functions** of parts labelled A and B?

Function of A Magnification (6)

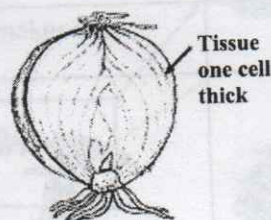
Function of B To put the slide on it



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(1) (2)

- (ii) Onion epidermis is a tissue only one cell thick. It is used in school laboratories on microscope slides to investigate plant cell structure using a microscope.



Describe how to **prepare a microscope slide** from a plant tissue. (6)

Get your onion epidermis plant tissue and put it on a glass slide, put some iodine on it and then apply that a plastic coverslip at an angle.


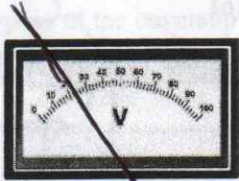


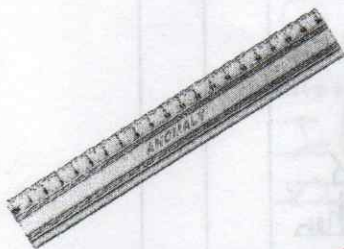
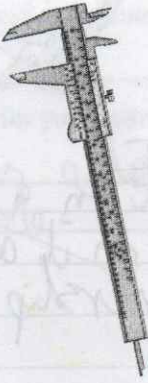
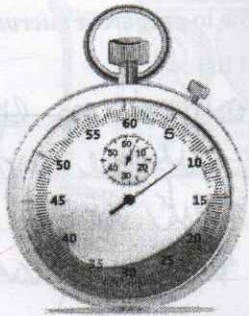
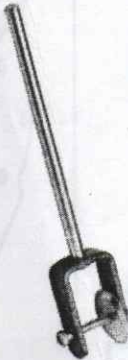
- (iii) Draw a **labelled diagram**, in the box provided, of a **plant cell**. (9)



Cell wall
Cell membrane
Nucleus
Chloroplast vacuole

PW1. Select and use appropriate measuring instruments

Q1: Label the instruments below:

			
Trundle wheel		Graduated cylinder	Thermometer
			
Ruler	Callipers	Stopwatch	Opirometer

Q2: What instrument/instruments would you use to measure?

To Measure:	Instrument	Unit	To measure:	Instrument	Unit
Mass	Balance	kg	Temperature	Thermometer	$^{\circ}\text{C}$
Diameter	Callipers	cm	Time	Stopwatch	seconds
Distance	Trundle wheel	m	Height	Ruler	cm / m
Volume	Graduated cylinder	cm^3	Curved distance	Opirometer	cm