

Practice Question Set For GCSE
Subject : Biology
Paper-1 Topic: B1 Cell Biology

Name of the Student: _____

Max. Marks : 18 Marks

Time : 18 Minutes

Mark Schemes

Q1.

(a) concentration of the sugar solution 1

(b) gained water 1

(water moves) by osmosis

or

(because) concentration of water outside the potato is greater than inside the cells / potato

allow converse statements

(because) concentration (of sugar solution) inside the potato is greater than outside the potato / cells

1

(c) all points correctly plotted 1
allow $\pm \frac{1}{2}$ a square

line of best fit drawn as a curve through all the points

ignore extrapolation of curve

1

(d) correct reading from their graph 1
allow $\pm \frac{1}{2}$ a square
allow answer in range 0.23 to 0.24 (mol/dm³) if no line drawn

(e)
$$\frac{0.25 \times 100}{7.96}$$

allow $\frac{(8.21-7.96) \times 100}{7.96}$ 1

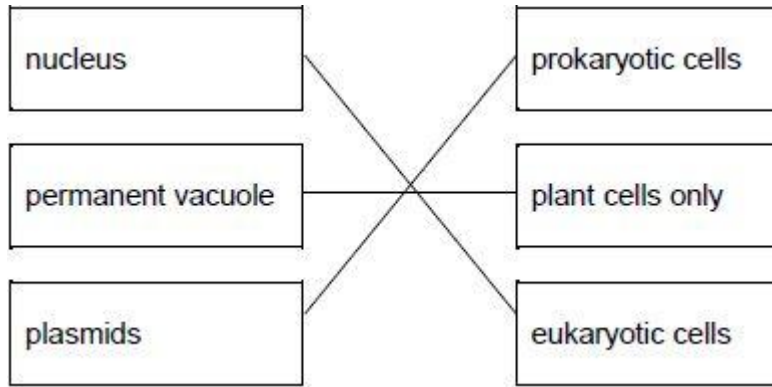
= 3.14(070352) 1

3.14 (%) 1
allow correct rounding to 3 sig figs of an incorrectly calculated percentage change

[9]

Q2.

(a)



allow **1** mark for one or two correct links

2

(b)

vacuole	ribosome	cell wall
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tick box takes precedence

if no tick is given, look at both the figure and the circling of words in the table

if writing is seen on the figure and in the table both must be correct

1

(c) turn the (fine focusing) knob until the cells are in focus

allow focus it

do **not** accept increase magnification

ignore decrease magnification

ignore clear

ignore references to resolution / illumination

ignore zoom in / out

1

(d) (rotate the) nosepiece / objective lens

allow change the (objective / eyepiece) lens

1

to a higher power (lens)

allow (to) increase the magnification

a comparator is required

ignore change / adjust the magnification

allow stronger or more powerful lens

ignore references to resolution / illumination unqualified

ignore zoom in / out

ignore references to an electron microscope

1

(e) conversion of units:

(112 mm →) 112 000 (μm)

or

(280 μm →) 0.28 (mm)

1

$$(\text{magnification} =) \frac{112}{280}$$

or

$$(\text{magnification} =) \frac{112000}{280}$$

allow **1** mark for no conversion of units 112 / 280

or

incorrect value from step 1 correctly substituted

1

400 (×)

do **not** accept if units are given

if no other mark scored allow **1** mark for:

$$\text{magnification} = \frac{\text{size of image}}{\text{size of real object}}$$

a triangle with words or letters in is insufficient, as the correct rearrangement is needed

1

an answer of 400 (×) scores **3** marks

[9]