Handling Data (M1): OCR A Level Biology Exam Questions by Topic

20 questions · 46 marks · about 55 minutes. Answer in the spaces, then check the mark schemes at the end.

Question 1 · A level Paper 2 · June 2019 · Q19(c)(i) · 2 marks

(c) One measure of the success of cloning procedures is the number of pregnancies that result in live births.

Table 19 shows information from the work of many scientists about the success of SCNT in four different species.

Species	Number of pregnancies	Number of live births
Goat	26	8
Monkey	3	2
Mouse	438	56
Sheep	110	48

Table 19

(i) Calculate the percentage of pregnancies that resulted in live births in goats and mice.

live births in goats = ... %

live births in mice = ... %

[2]

Turn over

Questions, mark schemes and examiners' report extracts © OCR.

Question 2 · A level Paper 1 · June 2023 · Q17(b) · 2 marks

(b) One of the students recorded the result shown in **Table 17.1**.

Table 17.1

Mean root length in test solution (number of grid squares)	Mean root length in water (number of grid squares)
16.5	13.9

Calculate the percentage change in mean root length in test solution compared with water.

Give your answer to **2** significant figures.

Change = ... % **[2]**

Questions, mark schemes and examiners' report extracts © OCR.

The students' results are shown in the tables.

Group A. Experiment conducted for 3 minutes.

Number of sprays of water	Distance moved by bubble (mm)				
	Trial 1	Trial 2	Trial 3	Mean	Rate of bubble movement (mm min^{-1})
0	34	30	31	.....	.....

Group B. Experiment conducted for 5 minutes.

Number of sprays of water	Distance moved by bubble (mm)				
	Trial 1	Trial 2	Trial 3	Mean	Rate of bubble movement (mm min^{-1})
1	31	34	32	32.3	6.5

Group C. Experiment conducted for 5 minutes.

Number of sprays of water	Distance moved by bubble (mm)				
	Trial 1	Trial 2	Trial 3	Mean	Rate of bubble movement (mm min^{-1})
2	12	10	9	10.3	2.1

(ii) Complete the table by filling in the missing values for mean **and** rate of bubble movement for group A.

Give your answers to **1** decimal place.

Mean = ... mm

Rate of bubble movement = ... mm min^{-1}

[2]

Questions, mark schemes and examiners' report extracts © OCR.

(b) A student obtained replicate readings for the movement of the air bubble during five minutes in three different conditions. The results are shown in Table 4.1.

Condition	Distance moved by bubble in 5 minutes (mm)						
	Trial 1	**Trial 2**	**Trial 3**	**Trial 4**	**Trial 5**	**Trial 6**	**Mean**
In still air	89	84	86	87	85	86	86.2
With an electric fan	142	139	144	138	139	141	140.5
In still air and lower leaf surface covered with petroleum jelly	32	28	31	57	27	29	34.0

Table 4.1

(i) Identify an anomalous reading in the data **and** evaluate the extent to which it has affected the mean that has been calculated.

.....

.....

.....

.....

.....

.....

.....

..... **[3]**

Questions, mark schemes and examiners' report extracts © OCR.

Question 5 · A level Paper 2 · June 2022 · Q19(a)(i) · 5 marks

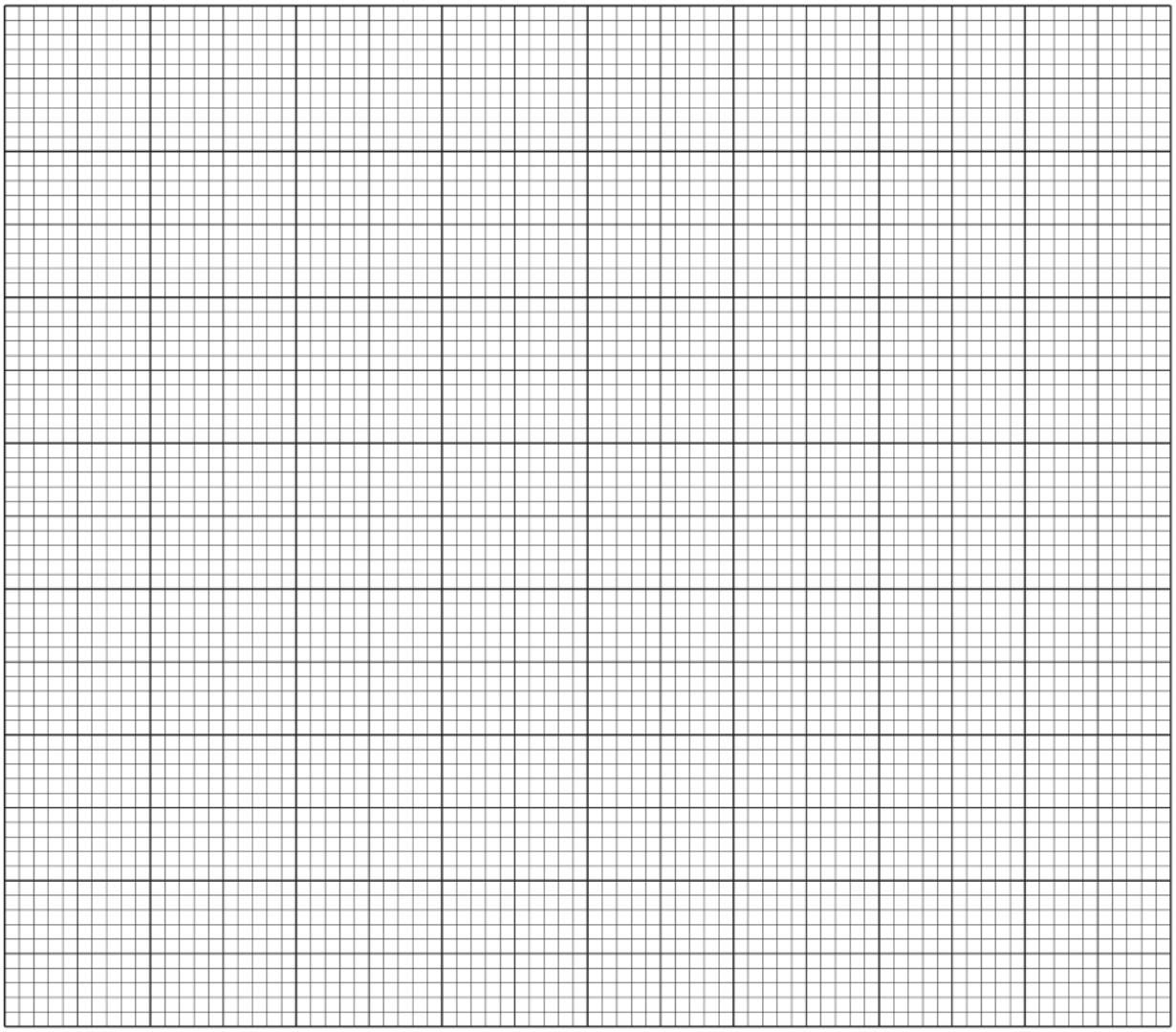
19 The Atlantic cod, *Gadus morhua*, is a large fish that is often eaten by humans.

(a) The body length of Atlantic cod varies between individuals.

The table below shows some data on the size of cod caught in one area of the Atlantic Ocean during one survey.

Body length (mm)	Frequency
$100 \leqslant x < 200$	10
$200 \leqslant x < 300$	48
$300 \leqslant x < 400$	121
$400 \leqslant x < 500$	130
$500 \leqslant x < 600$	119
$600 \leqslant x < 800$	46

(i) In the space provided, plot the results from the table as a suitable graph.



[5]

Questions, mark schemes and examiners' report extracts © OCR.

Question 6 · information from earlier in the question

(c) A group of students investigated the effect of temperature on the activity of two forms of trypsin: human trypsin and icefish trypsin.

Part of their method is shown below:

- use 10 cm^3 of 5% trypsin solution for all trials
- measure enzyme activity at 10, 20, 30, 40 and 50 °C for both enzymes
- carry out each trial in the same pH buffer
- repeat the experiment 5 times at each temperature
- measure enzyme activity by recording the area of gelatine on a photographic film that is broken down over a set time period
- calculate the rate of enzyme activity at each temperature.

(i) Suggest **and** explain two improvements that would increase the validity of the students' investigation.

Improvement .....

Explanation .....

.....

Improvement .....

Explanation .....

.....

[4]

Questions, mark schemes and examiners' report extracts © OCR.

(iii) The students recorded the temperature that produced the fastest reaction rate in each of the five replicates. These results are shown in Table 3.

Replicate	Temperature that produced the fastest reaction rate (°C)	
	Human trypsin	Icefish trypsin
1	40	20
2	10	10
3	30	20
4	40	30
5	40	30
Mean =	32.0	22.0
Mode =	40	20 and 30
Median =	40	20

Table 3

One of the students made the following statement:

I think the mean is a more accurate measure than the median or mode for these results.

Evaluate the student's statement.

.....

.....

.....

.....

..... **[2]**

Questions, mark schemes and examiners' report extracts © OCR.

Question 7 · A level Paper 3 · June 2018 · Q4(b)(i) · 1 mark

(b) Vici syndrome is a genetic disease that shows a recessive inheritance pattern. The allele responsible for Vici syndrome is found on chromosome 18.

(i) Two carriers of Vici syndrome have six children.

Calculate how many of the six children you would expect to:
- have Vici syndrome
- be carriers of Vici syndrome.

Vici syndrome .....

Carriers .....
[1]

Question 8 · A level Paper 3 · June 2018 · Q4(b)(ii) · 1 mark

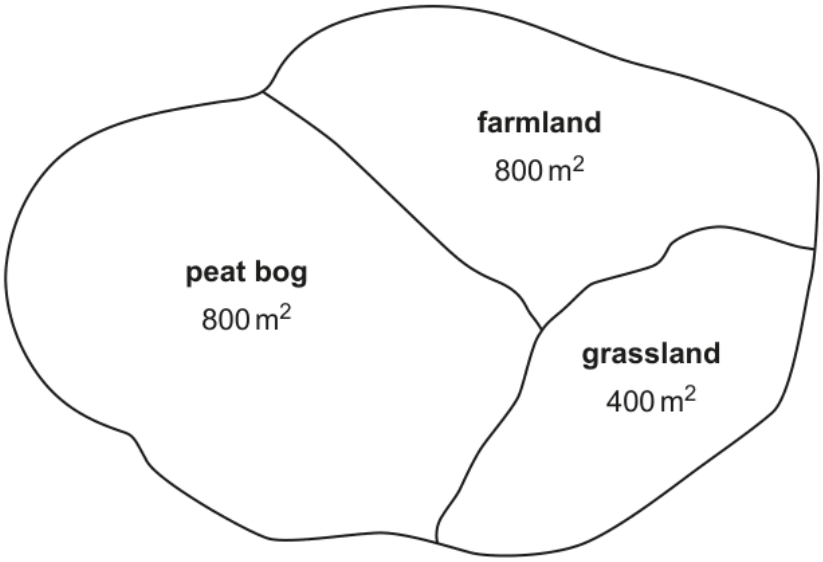
(ii) A daughter of these parents and a male carrier of Vici syndrome have a child.

Calculate the probability of the child having Vici syndrome.

Answer = ... **[1]**

Questions, mark schemes and examiners' report extracts © OCR.

5 Ecologists were studying an area that contained three different habitats. The area is shown in the diagram below.



(a) The ecologists sampled the area to estimate insect biodiversity.

Describe how the ecologists should choose the number and locations of their samples to ensure that the sampling is representative.

Use a calculation to support your answer.

.....

.....

.....

.....

.....

..... **[3]**

Questions, mark schemes and examiners' report extracts © OCR.

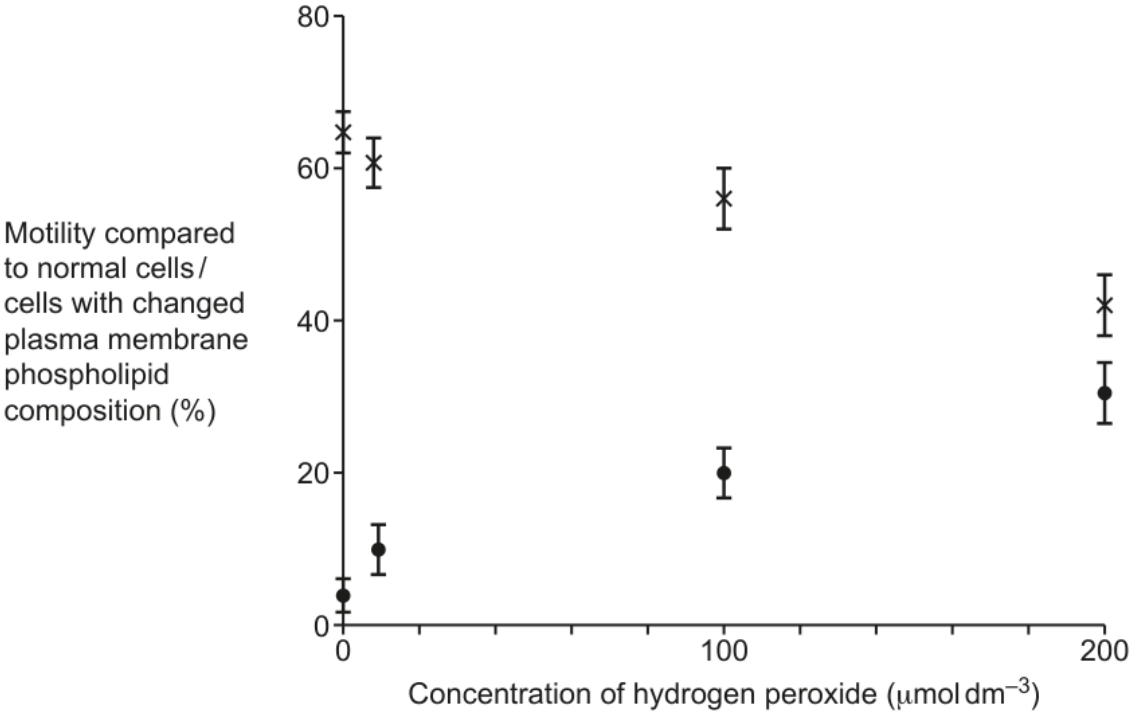
(ii) Scientists investigate the effect of hydrogen peroxide on sperm cells. This is the method that they use:

- incubate sperm cells with different concentrations of hydrogen peroxide for two hours
- measure the motility of the cells compared with normal sperm cells
- measure the percentage of cells that have changes in the composition of phospholipids in the plasma membrane.

They use sperm samples from 10 different men attending a fertility clinic and calculate mean values.

Their results are shown in **Fig. 21.2**.

Fig. 21.2



Key:

× = motility

● = cells with changed plasma membrane

The scientists conclude that hydrogen peroxide causes changes in the plasma membrane of sperm cells that reduces their motility.

Evaluate this conclusion.

.....

.....

Questions, mark schemes and examiners' report extracts © OCR.

Question 11 · AS Paper 2 · June 2018 · Q5(a)(ii) · 2 marks

(ii) Between 1913 and 2013 the approximate worldwide population of living elephants dropped from 10 000 000 to 500 000.

Calculate how many orders of magnitude smaller the elephant population is likely to be in 2213 compared to 1913.

Assume that the elephant population continues to decline at the same rate each 100 years.

Show your working.

Answer ..... **[2]**

Turn over

Question 12 · A level Paper 3 · June 2019 · Q3(c)(iv) · 2 marks

(iv) The students wanted to know whether there was a difference between the reaction rates of the two forms of trypsin at 30 °C.

They performed a statistical test on the mean of the five replicates for human trypsin and the five replicates for icefish trypsin.

Suggest the most appropriate statistical test for the students to use **and** explain why this test is appropriate.

.....

.....

.....

..... **[2]**

© OCR 2019

Questions, mark schemes and examiners' report extracts © OCR.

20 On a biology field trip, some students are studying an area of mixed woodland.

(a) Three tree species dominate the woodland: oak, ash and sycamore.

There are many small herbaceous plants in the woodland, but the students choose to collect data on only one: wood sorrel.

The students choose an oak tree, an ash tree and a sycamore tree and count every individual wood sorrel plant within a 3 m radius of each tree.

The results are shown in the table.

Species	**Wood sorrel population (total within 3 m radius)**					
Ash	44					
Oak	56					
Sycamore	20					

The null hypothesis of the students' investigation is that the species of tree would not affect the number of wood sorrel growing near it.

The students conclude that the conditions under oak trees are the most favourable of the three trees studied and that conditions under sycamore trees are the least favourable.

(i) Calculate the χ^2 value for the students' data.

Use the equation $\chi^2 = \sum \frac{(O-E)^2}{E}$

You may use the empty columns in the table to help with your calculation.

χ^2 = ... **[3]**

Questions, mark schemes and examiners' report extracts © OCR.

Question 14 · A level Paper 2 · June 2024 · Q20(a)(ii) · 3 marks

(ii) The critical value for χ^2 in this investigation at p = 0.05 is 5.991.

Discuss what can be concluded from the χ^2 calculation in part **(a)(i)**.

.....

.....

.....

.....

.....

.....

.....

..... **[3]**

Questions, mark schemes and examiners' report extracts © OCR.

(c) Water availability can affect the rate of photosynthesis in some plants.

Some students investigated the effect of soil water content on the rate of photosynthesis in two plant species: maize, *Z. mays*, and a xerophyte called *Calotropis procera*.

The students took measurements at six different sites for each species. They measured the water content of the soil and calculated the rate of photosynthesis at each site.

The students' data are shown in **Table 5.2**.

Calotropis procera		***Z. mays***	
Water content of soil (% by volume)	Mean rate of photosynthesis ($\mu mol\, CO_2\, m^{-2}\, s^{-1}$)	Water content of soil (% by volume)	Mean rate of photosynthesis ($\mu mol\, CO_2\, m^{-2}\, s^{-1}$)
12.1	4.2	32.3	21.6
10.0	4.0	29.0	20.2
7.2	6.0	24.5	19.2
4.0	4.1	18.1	16.5
2.5	3.3	15.4	16.8
1.8	2.0	11.6	8.0

Table 5.2

Table 5.3 shows a statistical table for r_s values.

***p* (%)**	**10**	**5**	**1**
n			
5	0.800	0.900	1.000
6	0.657	0.829	0.943
7	0.571	0.714	0.893
8	0.524	0.643	0.833

Table 5.3

21

(i) The students investigated the relationship between the water content of soils and mean rate of photosynthesis for the two plants.

Using the values in **Table 5.2**, calculate the Spearman's Rank Correlation Coefficient for water content and rate of photosynthesis in *Z. mays*.

Use the formula:

Questions, mark schemes and examiners' report extracts © OCR.

Question 16 · A level Paper 2 · June 2023 · Q17(b)(i) · 2 marks

(b) Some of the students' results are shown in the tables below.

Results for 2 a.u. hydrogen peroxide

Time (s)	Volume of oxygen produced (cm^3)				
	1	2	3	Mean	Standard deviation
30	5	6	5	5.3	0.6
60	9	10	9	9.3	0.6
90	13	14	13	13.3	0.6
120	16	17	18	17.0	1.0
150	19	20	21	20.0	1.0
180	21	22	23	22.0	1.0

Results for 8 a.u. hydrogen peroxide

Time (s)	Volume of oxygen produced (cm^3)				
	1	2	3	Mean	Standard deviation
30	22	23	23	22.7	0.6
60	37	39	38	38.0	1.0
90	49	49	47	48.3	1.2
120	57	58	55	56.7	1.5
150	61	63	59	61.0	2.0
180	64	67	62	64.3	2.5

Results for 20 a.u. hydrogen peroxide

Time (s)	Volume of oxygen produced (cm^3)				
	1	2	3	Mean	Standard deviation
30	57	55	58	56.7	1.5
60	78	74	78	76.7	
90	89	73	88	83.3	9.0
120	95	79	93	89.0	8.7
150	97	81	95	91.0	8.7
180	97	83	96	92.0	7.8

Question 17 · A level Paper 2 · June 2023 · Q17(b)(ii) · 2 marks

(ii) Use the standard deviations to discuss the repeatability of the students' results.

.....

.....

.....

.....

..... **[2]**

Questions, mark schemes and examiners' report extracts © OCR.

(b) The results of the experiment are shown in Fig. 24.2.

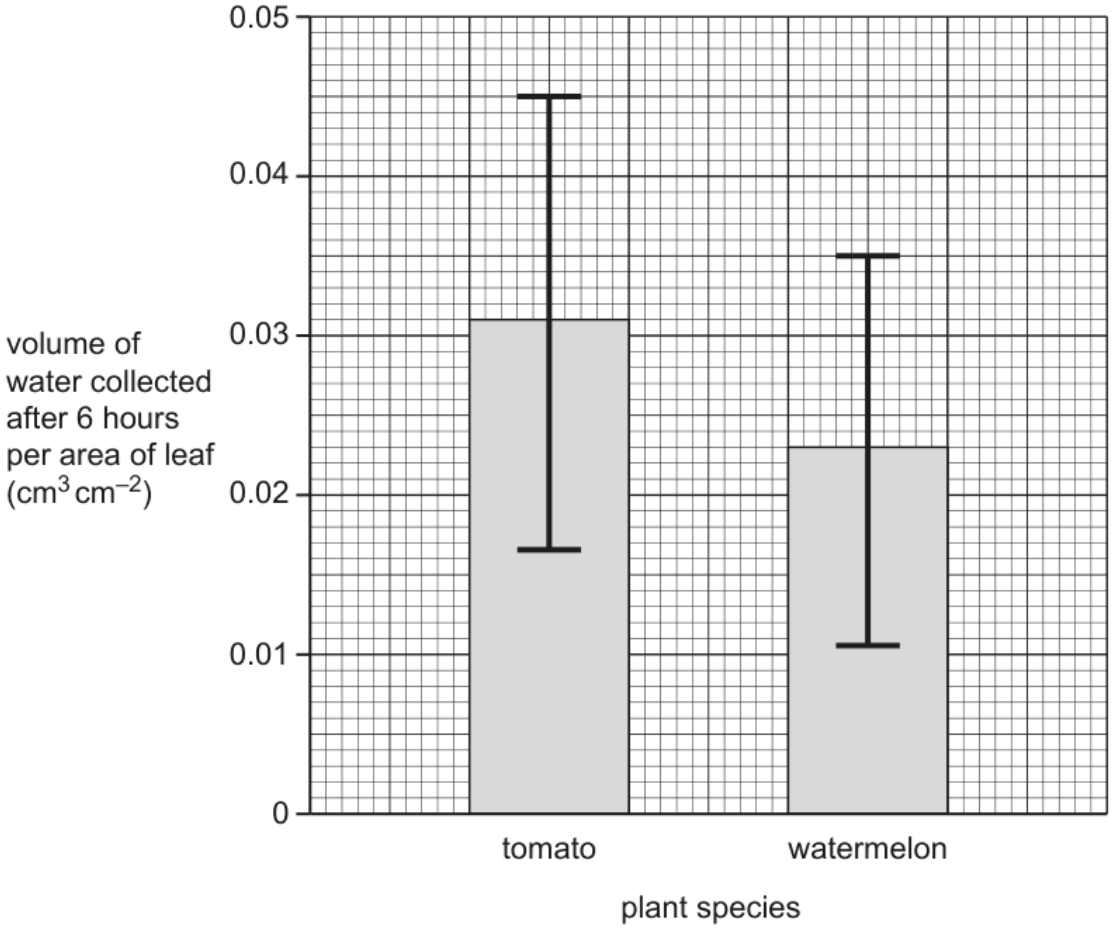


Fig. 24.2

What conclusion can be drawn from this graph? Justify your answer.

.....

.....

.....

.....

..... **[2]**

Questions, mark schemes and examiners' report extracts © OCR.

Question 19 · AS Paper 1 · June 2019 · Q21(c) · 1 mark

(c) State how the student could reduce the uncertainty of their data.

.....

..... **[1]**

Turn over

Question 20 · A level Paper 2 · June 2019 · Q16(b)(i) · 2 marks

(b) The apparatus shown in Fig. 16 can be used to demonstrate osmosis.

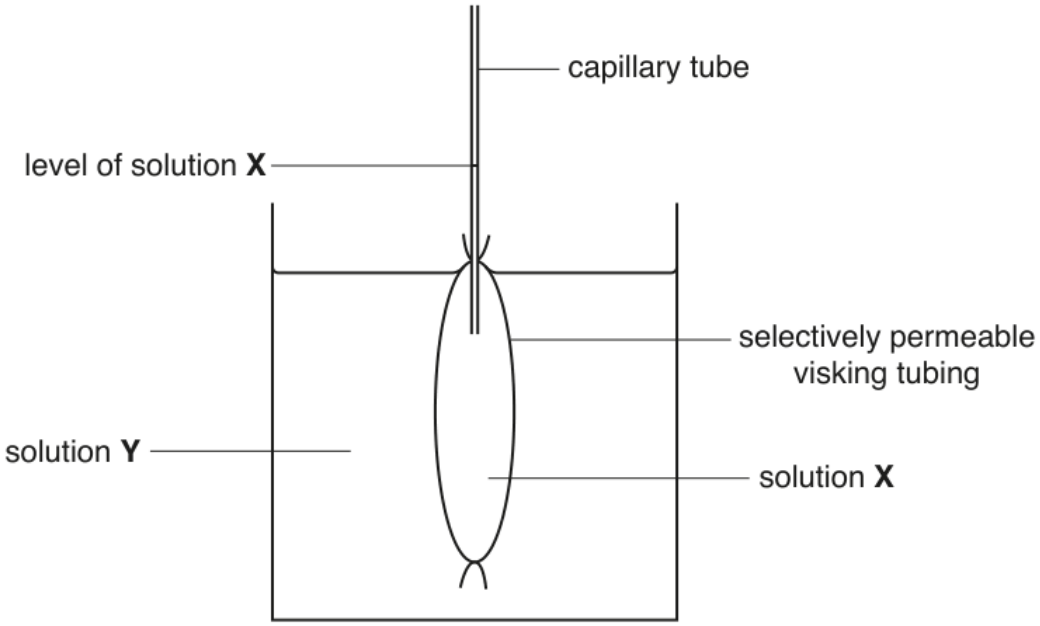


Fig. 16

When the capillary tube with visking tubing bag was placed in solution **Y**, the level of solution **X** inside the capillary tube rose from 10.5 mm to 26.5 mm.

(i) The ruler used to measure the distance along the capillary tube was accurate to the nearest 0.5 mm.

Calculate the percentage uncertainty of the measurement.

uncertainty = ... % **[2]**

Questions, mark schemes and examiners' report extracts © OCR.

Mark schemes

Question 1 · A level Paper 2 · June 2019 · Q19(c)(i) · 2 marks

(c)	(i)	goats: 31 / 30.8 mice: 13 / 12.8 ✓✓	2	**Both answers are required for 2 marks.** **ALLOW** 1 mark if one answer is correct and one is incorrect **ALLOW** 1 mark if both answers are correctly calculated but one or both are not given to 2 or 3 s.f.

Question 2 · A level Paper 1 · June 2023 · Q17(b) · 2 marks

17	(b)	**FIRST CHECK THE ANSWER ON ANSWER LINE** **if answer = 19 (%) award 2 marks** change in length = 16.5 – 13.9 = 2.6 ✓ percentage change = [2.6 ÷ 13.9] x 100 **OR** [16.5 – 13.9] ÷ 13.9 x100 **OR** 18.7 ✓ 19 (%) to 2 sig. figs. ✓

2	2.8	If answer incorrect check for MP1 or MP2 **max 1 mark** if answer not to 2 sig. figs. e.g. 18.7 / 19.0 / 18.71 / 18.705.....

Questions, mark schemes and examiners' report extracts © OCR.

Question 3 · AS Paper 2 · June 2023 · Q2(b)(ii) · 2 marks

		(ii)	**FIRST CHECK THE ANSWER IN TABLE / ON ANSWER LINE.** mean = 31.7✓ rate of bubble movement = 10.6 ✓

2	**2.8**	**ALLOW** for 1 mark mean **and** rate given to >1 decimal place mean = 31.66(66) rate per minute group A = 10.55(56) **ECF** from incorrect mean **e.g.** 'Mean 31.6/ 3 = 10.5' = 1 mark

Question 4 · AS Paper 2 · June 2019 · Q4(b)(i) · 3 marks

	(b)	**(i)**	**1** 57 / trial 4 of condition 3 ✓ **2** has made mean higher ✓ **3** (ignoring / excluding 57) mean = 29.4 ✓ **4** (using 57) increases mean by, 4.6 (mm) / 15.6% ✓	**max 3**

1 ALLOW lower leaf covered / with jelly for 'condition 3'
1 ALLOW 57, marked / circled, in table
ECF for mps 2, 3 and 4 if figure other than 57 selected

2 ALLOW if 57 not included mean would be less

4 ALLOW ora ignoring 57 decreases mean by, 4.6 mm / 13.5%
ECF from wrong mean calculated for mp 3

Questions, mark schemes and examiners' report extracts © OCR.

Question 5 · A level Paper 2 · June 2022 · Q19(a)(i) · 5 marks

19	**(a)**	**(i)**			**5**	3.3
			1	horizontal axis labelled 'body length (mm)' **AND** vertical axis labelled , 'frequency' / 'frequency density' (/100 mm) ✓		
			2	linear scale on **both** axes **AND** at least 50% of grid covered by plotted area ✓		
			3	histogram plotted with ruled lines and touching bars ✓		
			4	first 5 bars plotted accurately ± 0.5 squares and equal width ✓		
			5	6th bar twice the width and height 23 ✓		

Points 1 and 2 can be awarded for a line graph.

1 ALLOW unit written as '/ mm'

1 Unit for frequency density can be omitted.

4 Correct numbers: 10, 48, 121, 130, 119 (or 0.10, 0.48. 1.21, 1.30, 1.19 if frequency density used)

5 Height 0.23 if axis labelled 'frequency density'

Question 6 · A level Paper 3 · June 2019 · Q3(c)(iii) · 2 marks

iii	*I agree / yes, because…* two mode values exist (for icefish trypsin) ✓ *I disagree / no, because…* outlier / anomaly, included in the mean (for human trypsin) ✓ median / mode, not / less, affected by outliers ✓

2 max	**IGNORE** references to decimal places

Questions, mark schemes and examiners' report extracts © OCR.

Question 7 · A level Paper 3 · June 2018 · Q4(b)(i) · 1 mark

b	**i**	*syndrome* 1 or 2 **and** *carriers* 3 ✓	**1**

DO NOT ALLOW 1.5

IGNORE 25% probability of a child having the syndrome and 50% probability of being a carrier.

Questions, mark schemes and examiners' report extracts © OCR.

Question 8 · A level Paper 3 · June 2018 · Q4(b)(ii) · 1 mark

ii	0.25 / 25% / ¼ / 1 in 4 ✓	1

IGNORE 25 without %
IGNORE 1:3

- Probability of each genotype in couple Z's offspring: VV = 0.25, Vv = 0.5, vv = 0.25.
- Probability that mother is VV and child is vv = 0 x 0.25 = 0
- Probability that mother is Vv and child is vv = 0.25 x 0.5 = 0.125
- Probability that mother is vv and child is vv = 0.5 x 0.25 = 0.125
- 0.125 + 0.125 = **0.25**

Question 9 · A level Paper 3 · November 2020 · Q5(a) · 3 marks

5	a	stratified (sampling) ✓ detail of stratified sampling ✓ *correct calculation:* 40% (in farmland), 20% (in grassland), 40% (in peat bog) **OR** proportional numbers ✓	3	3.3 3.4

e.g. number of samples in each sector is proportional to the area or implied by correct calculation / random sampling within each sector

e.g. 8, 4 and 8 samples

Questions, mark schemes and examiners' report extracts © OCR.

Question 10 · A level Paper 1 · June 2024 · Q21(c)(ii) · 3 marks

21	**(c)**	**(ii)**		*Evidence to support*	**max 3**
			1	as (H_2O_2) concentration increases motility (of treated sperm) decreases ✓	
			2	as (H_2O_2) concentration increases cells with changes to (composition of) plasma membrane increase ✓	
				*Evidence that does not support -**max 2***	
			3	correlation does not prove causation ✓	
			4	sample size was (relatively) small / only 10 men ✓	
			5	no statistical test has been performed ✓	
			6	(sperm cell) samples , not representative / show bias ✓	
			7	(some motility) error bars overlap ✓	

MP1 ALLOW e.g. negative correlation between hydrogen peroxide concentration and motility
MP1 DO NOT ALLOW normal sperm cells

MP2 ALLOW e.g. positive correlation between concentration of hydrogen peroxide and cells with changes to plasma membrane

MP3 ALLOW there may have been another cause of low motility

MP5 ALLOW no correlation coefficient calculated / no Spearman's rank
MP6 ALLOW samples from fertility clinic more likely to have abnormal sperm
MP6 ALLOW *idea of* skewed results

Questions, mark schemes and examiners' report extracts © OCR.

Question 11 · AS Paper 2 · June 2018 · Q5(a)(ii) · 2 marks

5(a)(ii)	**1** ref. 95% (decrease) **OR** 5% (remain) **OR** 25 000 (in 2113) ✓ **2** 1250 (in 2213) **OR** 4 (orders of magnitude) ✓

Question	Answer
2	**Look for two correct stages of working corresponding to mps 1 and 2, irrespective of final answer.** *Exemplar working:* There is a 95% decrease in 100 years from 1913 to 2013, so: 2113: 500 000 x 0.05 = 25 000 left 2213: 25 000 x 0.05 = 1250 left 1.25×10^3 compared to 1×10^7 is 4 orders of magnitude smaller.

Mark	Guidance

Question 12 · A level Paper 3 · June 2019 · Q3(c)(iv) · 2 marks

	iv	(Student's)(unpaired) t-test ✓ (they are) comparing **means** (of two data sets) / AW ✓

2	**IGNORE** standard deviation **DO NOT ALLOW** paired / dependent / related, t-test e.g. 'finding the difference between 2 means' **ALLOW** 'compare averages of 2 data sets'

Questions, mark schemes and examiners' report extracts © OCR.

20	(a)	(i)	**FIRST CHECK ON ANSWER LINE** **If answer = 16.8 award 3 marks**

	O	E	O−E	$(O-E)^2$	$(O-E)^2/E$
A	44	40	4	16	0.4
O	56	40	16	256	6.4
S	20	40	20	400	10
		✓			✓

$\Sigma(O-E)^2/E = 16.8 / 16.80$ ✓

3	2.4 **Element**	**CREDIT** working marks seen anywhere **ALLOW** 1 mark for correct summation of candidate's '$(O-E)^2/E$' column **ALLOW** 2 marks for… • 17 / 16.800 **ALLOW** 2 marks for common errors with Expected numbers (**IGNORE s.f.**) • 165.6 (E = 120) • 16.4 (E = 44) • 25.7 (E = 56)

Questions, mark schemes and examiners' report extracts © OCR.

20	**(a)**	**(ii)**	differences (between observed and expected) are significant ✓ (less than) 5% chance that (difference is) due to chance ✓ reject , null hypothesis / H_0 ✓ there is an association between tree species and wood sorrel population / AW ✓

3 max	**3.1**	**ALLOW ora** if candidate answer in (i) is below 5.991 **ALLOW** (>) 95% confident that (the difference is) not due to chance **ALLOW** tree species affects wood sorrel **ALLOW** wood sorrel less likely to grow near sycamore **ora**

Questions, mark schemes and examiners' report extracts © OCR.

Question 15 · A level Paper 3 · November 2021 · Q5(c)(i) · 3 marks

c	i	**FIRST CHECK ON ANSWER LINE** **If answer = 0.943 award 3 marks** $\Sigma d^2 = 2$ ✓ $n(n^2 - 1) = 210$ ✓ $1 - (6 \times 2) / 210 = 0.943$ ✓	3

2.4	**ALLOW** calculator value (0.942857) or any correctly rounded value **ALLOW ECF** final answer if incorrect values used for Σd^2 and / or $n(n^2 - 1)$ for mp3

Question 16 · A level Paper 2 · June 2023 · Q17(b)(i) · 2 marks

17	(b)	(i)	**FIRST CHECK ON ANSWER LINE** **If answer = 2.3 award 2 marks** mean = 76.7 $\Sigma(x-\overline{x})^2 = 10.67$ ✓ correct answer to 1 decimal place ✓

2 2.8	**ALLOW** 1 mark for 2.3 to >1 decimal place. Check table for correct answer.

Questions, mark schemes and examiners' report extracts © OCR.

Question 17 · A level Paper 2 · June 2023 · Q17(b)(ii) · 2 marks

(ii)	standard deviations are low(er) at , low(er) concentration(s) / earlier times ✓ **ora** more repeatable at , (stated) low(er) concentration(s) / (stated) earlier times ✓ **ora**	**2**	3.4

ALLOW AW for 'concentrations', e.g., a.u. **IGNORE** quoted standard deviations **ALLOW** less repeatable as time goes on **IGNORE** it is repeatable / not repeatable (must be comparative) **CREDIT** 'higher precision' as AW for 'more repeatable'

Question 18 · AS Paper 1 · November 2020 · Q24(b) · 2 marks

24	**(b)**	*conclusion* there is (probably) no (significant) difference between the transpiration rates of tomato and water melon leaves ✓ *because* difference in, water collected / transpiration rate, between tomato and watermelon very small ✓ standard deviations (very) large / data very spread out ✓ *max 1*

2 max	**3.1/3.2**	**ALLOW** only 0.008 cm^3 difference 'for very small' **ALLOW** error bars / standard deviations overlap **ALLOW** SD for standard deviation **ALLOW** range bars overlap

Questions, mark schemes and examiners' report extracts © OCR.

Question 19 · AS Paper 1 · June 2019 · Q21(c) · 1 mark

	(c)		use more, accurate / precise apparatus / described **OR**	1	
			use calipers / micrometer ✓		
			Total	8	

Question	Answer	Marks	Guidance

Question 20 · A level Paper 2 · June 2019 · Q16(b)(i) · 2 marks

(b)	(i)	**FIRST CHECK ON ANSWER LINE** **If answer = 6.25 or 6.3 award 2 marks** ✓✓ *If answer is incorrect* **ALLOW** *1 mark max for any one of…* correct answer to 1 or >3 s.f. 3.125 ± 0.005 0.0625 or 0.063 (2 x 0.5) / (26.5 – 10.5) x 100 ✓	2

Questions, mark schemes and examiners' report extracts © OCR.