OCR
RECOGNISING ACHIEVEMENT

SPECIMEN F

GENERAL CERTIFICATE OF SECONDARY EDUCATION

GATEWAY SCIENCE

BIOLOGY B

B731/01

Unit B731: Biology modules B1, B2, B3 (Foundation Tier)

Candidates answer on the question paper
A calculator may be used for this paper.

OCR Supplied Materials:
None

Other Materials Required:
- Pencil
- Ruler (cm/mm)

Duration: 1 hour 15 minutes

Candidate Forename		Candidate Surname	

Centre Number						Candidate Number				

INSTRUCTIONS TO CANDIDATES

- Write your name clearly in capital letters, your Centre Number and Candidate Number in the boxes above.
- Use black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully and make sure that you know what you have to do before starting your answer.
- Answer **all** the questions.
- Write your answer to each question in the space provided, however additional paper may be used if necessary.

INFORMATION FOR CANDIDATES

- Your quality of written communication is assessed in questions marked with a pencil (✎)**.**
- The number of marks for each question is given in brackets **[ ]** at the end of each question or part question.
- The total number of marks for this paper is **75**.
- This document consists of **24** pages. Any blank pages are indicated.

Examiner's Use Only:			
1		9	
2		10	
3		11	
4		12	
5		13	
6		14	
7			
8			
Total			

Answer **all** the questions.

Section A – Module B1

1 Deb is thirteen years old.

Her doctor has told her that she must eat enough protein each day.

She can calculate her estimated average requirement (EAR) for protein in grams using the formula:

EAR in g = 0.6 × body mass in kg

Deb has a mass of 58 kg.

Look at the information about how much protein Deb eats in one day.

food	**protein content in grams**
breakfast cereal	5.0
salad sandwich	8.0
macaroni cheese pasta	13.9
rice pudding	3.0
tinned peaches	0.5

Using the formula for EAR, should Deb be concerned about the amount of protein she eats?

Explain why.

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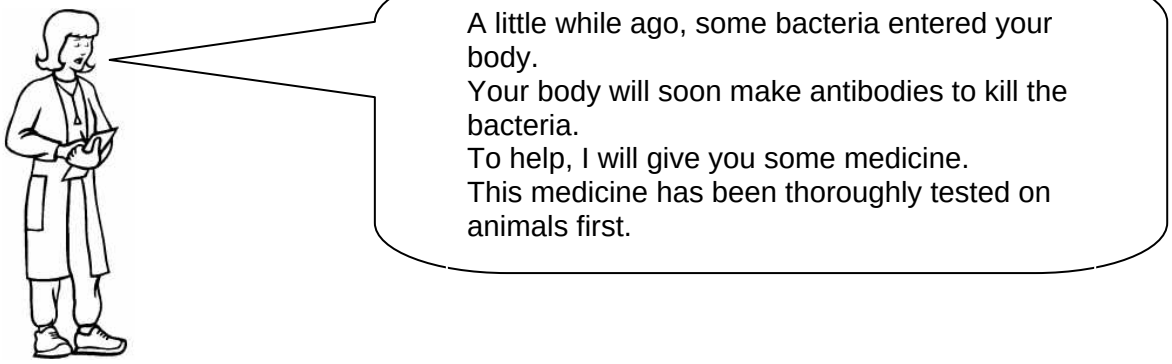
..... **[3]**

[Total: 3]

2 Chaminda visits the doctor because he feels ill.

The doctor tells him:



(a) Describe how Chaminda's body normally defends against bacteria.

.....

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..... **[4]**

(b) Chaminda is concerned that the medicine had been tested on animals.

Suggest what his concerns might be.

.....

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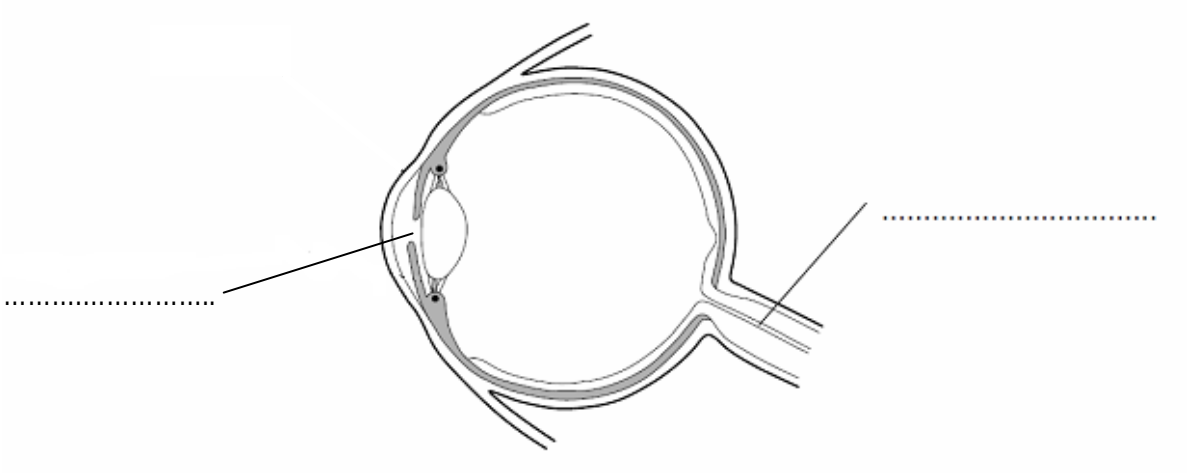
..... **[2]**

[Total: 6]

3 The diagram shows parts of a human eye.



(a) Finish labelling the diagram.

Choose the labels from this list.

blindspot **iris** **optic nerve** **pupil** **retina**

[2]

(b) (i) Look at the list of actions.

The eye is the receptor for all these actions.

Which of the actions are reflexes?

Put a tick (✓) in the box next to each reflex actions.

Put a cross (**X**) in the box next to each of the actions which are **not** reflex actions.

Automatically blinking when an object is thrown towards your face.	
Changing the shape of your pupil without thinking in bright light.	
Turning on the light when it gets dark.	

[1]

(ii) Some reflex actions slow down as people get older.

Why might this be a problem?

.....

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

[Total: 4]

4 Tobacco smoke contains chemicals and can affect the lungs.

(a) One of these chemicals is an addictive substance.

Write down the name of this chemical.

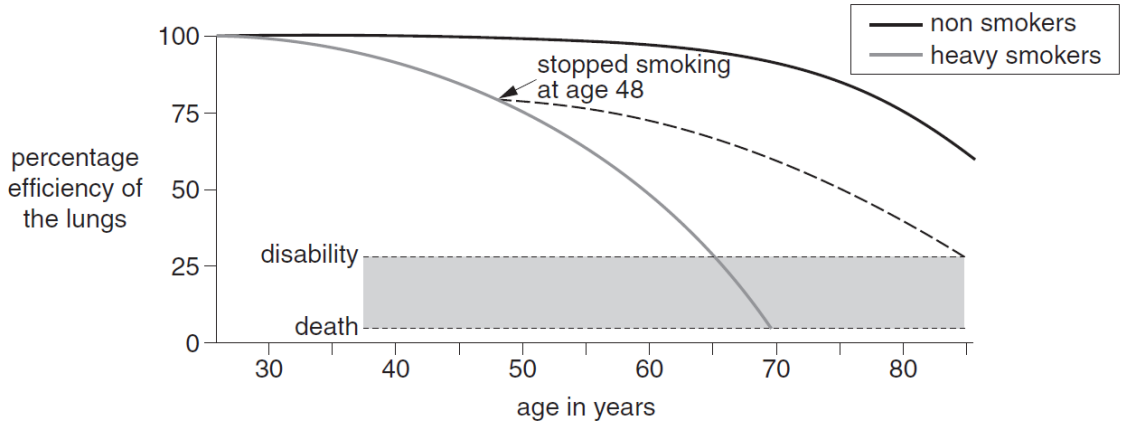
..... **[1]**

(b) The graph shows how well the lungs work at different ages.

This is shown for two groups of people.

One group is heavy smokers. The other group is non-smokers.

The dotted line shows the possible effect of stopping smoking at age 48.



Doug is a 48 year-old heavy smoker.

(i) Doug decides to give up smoking.

What difference will this make to the age at which lung damage is likely to make him disabled?

.....

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

(ii) Explain this difference in the age at which Doug would become disabled.

Use your knowledge of the effect of smoking on the lungs in your answer.

.....

.....

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

[Total: 5]

5 Basil is a gardener.

He keeps a diary of the work that he does in his garden.

Here is part of his diary.

27th September

Today I decided to grow some new geranium plants.

I cut small shoots off the plants and dipped them into a powder to make them grow roots.

I then planted the shoots in some soil.

(a) Basil dips the geranium shoots into a powder containing plant hormones before planting them.

Explain why.

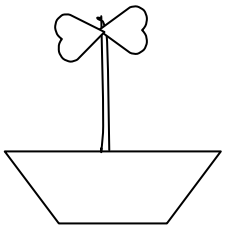
..... **[1]**

(b) Basil thinks that his geranium shoots grow towards light.

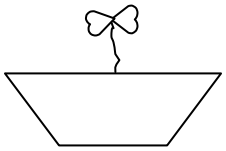
He does an experiment to test this.

> *Method*
>
> I left one plant locked in a dark cupboard for one week.
>
> I left another plant on my desk in a classroom for two weeks and watered it every day.

Look at the diagrams of the plants at the end of the experiment.



light



dark

Based on his evidence Basil concludes that geranium shoots do grow towards the light, because the plant in the light grew better.

Is Basil right to draw this conclusion?

Evaluate his method and his conclusion.

✎ *The quality of written communication will be assessed in your answer to this question.*

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..... **[6]**

[Total: 7]

Section B – Module B2

6 Look at the pictures of four organisms.

organism **W**

organism **X**

organism **Y**

organism **Z**

(a) Which organisms are classified in the same class of arthropod?

Explain your answer.

.....

.....

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

(b) Organism **X** is a hover fly. It is a prey species. It has wings which help it to escape predators.

Explain how **two other** adaptations of this organism help it to avoid being caught as prey.

.....

.....

.....

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

[Total: 4]

7 Banana plants are grown in large fields called plantations.

(a) The banana plants grow very close together.

One advantage of this is that it reduces the growth of weeds.

Explain how.

.....

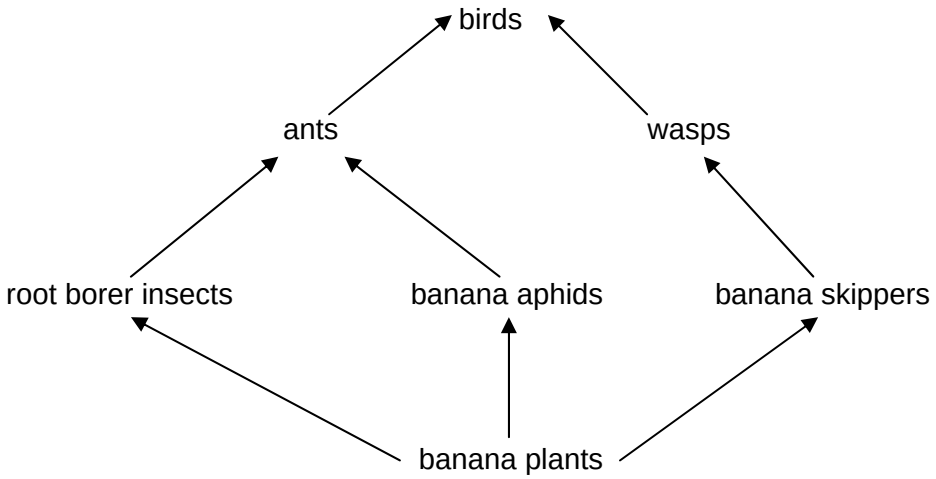
..... **[2]**

(b) The plants also need carbon and nitrogen to survive. These are recycled in nature when plants and animals decay.

In what form is carbon taken up by plants?

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

(c) Banana plants are part of a food web.



(i) How many trophic levels are there in this food web?

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

(ii) One year there are fewer ants in the plantation.

The crop of bananas decreases.

Use the food web to suggest why this happens.

.....

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

(iii) Energy **enters** this food web and **passes** from organism to organism. Some energy is **lost** from the food web.

Write about how these transfers of energy happen in this food web.

The quality of written communication will be assessed in your answer to this question.

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..... **[6]**

[Total: 12]

8 This article about the Great Bustard appeared in a newspaper.

© iStockphoto.com/Steven Cooper

Welcome back Big Bird

The Great Bustard was a giant among British birds.

It had a wingspan of nearly two metres and used to be a great sight as it flew over the countryside. Great Bustards needs a lot of space around them to breed. In the 1870s they became extinct in Britain.

The Great Bustard has now been reintroduced into Britain.

(a) The Great Bustard is not extinct in Turkey.

A group of scientists looked at Great Bustards in three different regions in Turkey.

They measured the area of each region and counted the number of Great Bustards living there.

Their results are shown in the table.

region	area of the region in km^2	number of birds		male:female ratio	total number of birds
		male	female		
1	898	10	14	5:7	24
2	383	1	30	1:30	31
3	754	14	21	……..	35

(i) Finish the table.

Write the missing male:female ratio in the empty box.

[1]

(ii) Use this data and your own knowledge to suggest in which region the Great Bustard is most likely to become extinct. Explain why.

.....

.....

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.....

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

(b) What steps could be taken to help the Great Bustard to survive in Britain now it has been reintroduced?

.....

.....

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

[Total: 6]

9 Alexandra is worried about the amount of air pollution in her village.

She wants to find out whether the level of air pollution in her village is higher than in another village 20 miles away.

She could measure the level of air pollution in the two villages using two different methods.

Describe the methods she could use and how she would know where the air pollution is higher.

.....

.....

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

[Total: 3]

Section C – Module B3

10 This question is about blood and the heart.

(a) Which **one** is a true statement about the heart?

Put a tick (✓) in the box next to the true statement.

It is the largest organ in the body.	☐
The right side pumps blood to the lungs.	☐
The left side pumps blood to the lungs.	☐
Arteries take blood back to the heart.	☐

[1]

(b) Blood contains different types of cells.

One type of cell is the red blood cell.

Describe the **jobs** of **two** other components of the blood.

.....

.....

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

(c) Red blood cells contain haemoglobin.

Some people have mutations in the genes for haemoglobin.

These mutations stop the haemoglobin working properly.

Suggest what effect this has on the people with the mutations.

.....

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

[Total: 5]

11 The table shows some of the structures found in cheek cells.

It also shows the width of these structures.

structure	**width in mm**
ribosomes	0.00002
nucleus	0.005
mitochondria	0.001
chromosomes	0.00001

(a) Write down the function of the mitochondria.

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

(b) **(i)** A light microscope allows a person to see objects as small as 0.001mm.

Which of the structures shown in the table can be seen with a light microscope?

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

(ii) In 1953, Watson and Crick worked out the structure of DNA.

To do this, they needed to use X-ray data obtained by other scientists.

They could not use a light microscope to work out the structure of DNA.

Explain how the information in the table shows that they could not use a light microscope to study DNA.

.....

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

[Total: 4]

12 The table shows information about four varieties of blueberries.

variety	part of the season when fruit is ready	fruit	can be harvested by machine
Spartan	early	large with tangy flavour	yes
Toro	midseason	medium size and sweet	no
Bluecrop	midseason	large but bitter	yes
Northblue	midseason	small with wild blueberry taste	no

Sandra is a commercial grower.

She grows all four blueberry varieties to sell to supermarkets.

(a) Sandra wants to grow a new variety of blueberry.

She uses selective breeding to produce blueberries that are large and sweet.

Write down **two** varieties she could use in her breeding program.

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

(b) A supermarket has asked Sandra to produce large blueberries with a wild blueberry taste for early in the season.

Sandra would like to be able to harvest the blueberries using machines.

Sandra is deciding between two methods to produce the new variety:

- genetic engineering
- cloning.

Which method would be most appropriate for her to use to produce the new variety?

Explain your answer.

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.....

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

(c) Some people are worried about genetic engineering.

Describe **one** possible reason why they are worried.

.....

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

[Total: 5]

13 This question is about human reproduction.

The diagram shows a sperm cell.

Sperm cells are adapted to join with an egg cell. One example of an adaptation is that they have a tail for swimming.

Body cells, like cheek cells, are not adapted to join with an egg cell.

Write about the differences between a sperm cell and a body cell and how these differences make a sperm cell adapted to join with an egg.

✎ *The quality of written communication will be assessed in your answer to this question.*

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..... **[6]**

[Total: 6]

14 Gary wants to measure his pulse rate.

(a) Describe how he can measure his pulse rate.

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.....

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

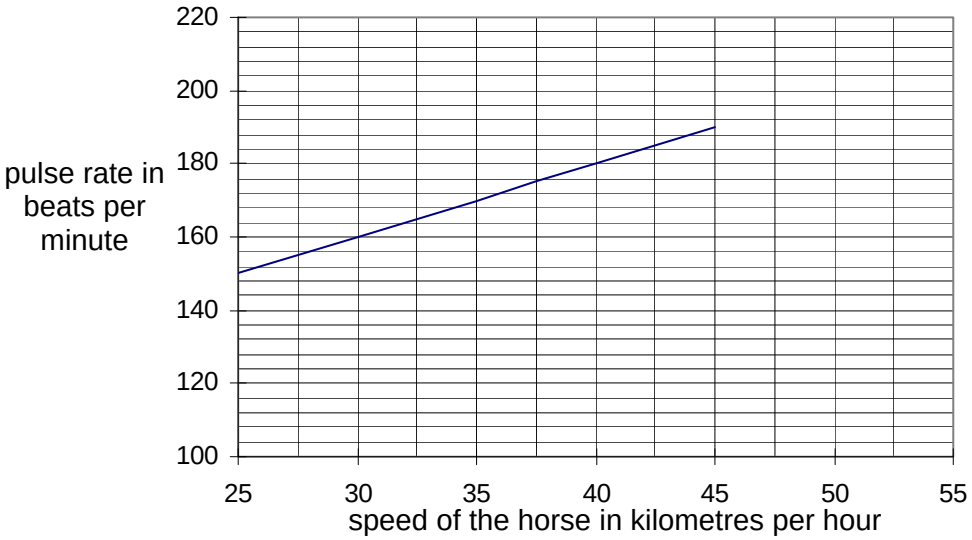
(b) Racehorses are bred and trained to run in races.

Trainers measure each horse's pulse rate to find out how fit the horse is.

They measure the pulse rate when the horse is running at different speeds.

This tells them how fast the horse can get oxygen to its muscles.

Some results for a horse are shown on the graph.



(i) Describe how the pulse rate changes as the horse runs faster.

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

(ii) Trainers know that a horse runs best when its muscles are receiving enough oxygen.

Above 200 heart beats per minute, a horse starts to rely on **anaerobic** respiration.

Use the graph to estimate the maximum speed at which this horse can run without relying on anaerobic respiration.

Show on the graph how you work out your answer.

Answer = ... km per hour **[2]**

[Total: 5]

[Paper Total: 75]

END OF QUESTION PAPER

PLEASE DO NOT WRITE ON THIS PAGE

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RECOGNISING ACHIEVEMENT

SPECIMEN F

GENERAL CERTIFICATE OF SECONDARY EDUCATION

GATEWAY SCIENCE

BIOLOGY B

B731/01

Unit B731: Biology Modules B1, B2, B3 (Foundation Tier)

MARK SCHEME

Duration: 1 hour 15 minutes

MAXIMUM MARK 75

This document consists of 16 pages

Guidance for Examiners

Additional guidance within any mark scheme takes precedence over the following guidance.

1. Mark strictly to the mark scheme.
2. Make no deductions for wrong work after an acceptable answer unless the mark scheme says otherwise.
3. Accept any clear, unambiguous response which is correct, eg mis-spellings if phonetically correct (but check additional guidance).
4. Abbreviations, annotations and conventions used in the detailed mark scheme:

   / = alternative and acceptable answers for the same marking point
   (1) = separates marking points
   not/reject = answers which are not worthy of credit
   ignore = statements which are irrelevant - applies to neutral answers
   allow/accept = answers that can be accepted
   (words) = words which are not essential to gain credit
   words = underlined words must be present in answer to score a mark
   ecf = error carried forward
   AW/owtte = alternative wording
   ora = or reverse argument

   eg mark scheme shows 'work done in lifting / (change in) gravitational potential energy' (1)
   work done = 0 marks
   work done lifting = 1 mark
   change in potential energy = 0 marks
   gravitational potential energy = 1 mark

5. If a candidate alters his/her response, examiners should accept the alteration.
6. Crossed out answers should be considered only if no other response has been made. When marking crossed out responses, accept correct answers which are clear and unambiguous.

Question			Expected answer	Marks	Additional guidance
1			Deb's EAR is 34.8 (1) Total protein intake is 32.4g which is less than EAR (1) **any one from** yes (no mark) because she / teenagers needs (a lot of) protein for growth (1) Deb's actual requirement for protein will be higher than calculated because she is a teenager (1) no (no mark) idea that she is only slightly below and could make this up another day / EAR is an average figure so she should take average protein intake over a number of days (1)	3	marking points must support conclusion to gain credit
			Total	**3**	

Question			Expected answer	Marks	Additional guidance
2	**(a)**		skin provides a barrier / AW (1) clotting blood prevents entry (at cuts) (1) trapped by mucus in airways (1) killed by (hydrochloric) acid in stomach (1)	4	
	(b)		ethical worries concerning animal rights (1) concerns about different effects on animals compared with humans (1)	2	
			Total	**6**	

Question			Expected answer	Marks	Additional guidance
3	(a)		pupil (1) optic nerve (1)	2	
	(b)	(i)	✓ ✓ **X**	1	all three correct to score the mark
		(ii)	because reflexes are protective (so if they are slower there is) more chance of injury / AW (1)	1	
			Total	**4**	

Question			Expected answer	Marks	Additional guidance
4	(a)		nicotine (1)	1	
	(b)	(i)	older / takes longer to become disabled (1) 20 years extra (before becoming disabled) (1)	2	
		(ii)	because smoking causes damage to cilia which means chemicals build up and cause cancer / emphysema (1) but giving up prevents further damage to cilia / less build-up of chemicals so reducing risk of cancer / emphysema (1)	2	**answers must link giving up smoking to limiting lung damage and subsequent risk of disease in order to gain full credit**
			Total	**5**	

Question			Expected answer	Marks	Additional guidance
5	(a)		to make roots grow (faster) (1)	1	
	(b)		**Level 3** Answer thoroughly evaluates both conclusion and method, in terms of not testing directional growth, and applies knowledge of how to conduct this experiment to discuss in detail the flaws in the experimental method outlined, including lack of unidirectional light and control of variables. All information in answer is relevant, clear, organised and presented in a structured and coherent format. Specialist terms are used appropriately. Few, if any, errors in grammar, punctuation and spelling. (5–6 marks) **Level 2** A limited evaluation of conclusion and method, and applies knowledge of how to conduct this experiment to discuss specific flaws in the method including timing and watering. For the most part the information is relevant and presented in a structured and coherent format. Specialist terms are used for the most part appropriately. There are occasional errors in grammar, punctuation and spelling. (3–4 marks) **Level 1** An incomplete answer, simple evaluation in terms of conclusion not right, applies knowledge to experimental method to identify method was not a 'fair test'. Answer may be simplistic. There may be limited use of specialist terms. Errors of grammar, punctuation and spelling prevent communication of the science. (1–2 marks) **Level 0** Insufficient or irrelevant science. Answer not worthy of credit. (0 marks)	6	**relevant points include:** • Basil is not right to draw this conclusion based on his evidence evaluation of conclusion • idea that conclusion not valid / not based on evidence • because experiment did not test directional growth • experiment was testing whether plant grows in light or dark evaluation of method • not enough detail to allow method to be followed • reference to condition of unidirectional light required / idea that should have blocked out light from all but one direction • reference to not watering both batches equally • reference to not leaving them to grow for the same length of time • idea of not a 'fair test' • reference to not doing repeats / controlling variables • reference to variables that were not controlled eg size of plant at the start **allow** examples of how the experiment should have been done
			Total	**7**	

Question			Expected answer	Marks	Additional guidance
6	(a)		scorpion and spider (1) because they both have 8 legs (1)	2	both needed for mark **allow** body **not** divided into head, thorax and abdomen (1)
	(b)		has warning colouration to deter predators (1) mimicry of wasps which have stings (1) eyes on the side of its head giving a wide field of vision (1)	2	
			Total	**4**	

Question			Expected answer	Marks	Additional guidance
7	(a)		idea of competition (1) bananas stop light reaching the weeds / weeds cannot photosynthesise (1) bananas use water / stop water / overshadow reaching weeds so weeds do not grow (1) banana plants outcompete weeds for minerals etc. (1)	2	
	(b)		carbon dioxide (1)	1	**Not** gas
	(c)	(i)	4 (1)	1	
		(ii)	number of root borers and aphids increases because fewer ants are eating them (1) the increase in numbers of root borers and banana aphids causes more damage to the roots and leaves of the banana plants, reducing the banana crop (1)	2	**allow** higher level answers specifically referring to the increased action of banana aphids on leaves and root borer insects in roots and how this will limit water uptake/photosynthesis, decreasing growth of banana crop (2) **ignore** references to reduced number of banana plants

Question			Expected answer	Marks	Additional guidance
7	(c) ✎	(iii)	**Level 3** Applies understanding of energy transfers to describe in detail the processes of energy capture, transfer between trophic levels and loss at all stages for the banana plant food web and clearly sequences them in the correct order. All information in answer is relevant, clear, organised and presented in a structured and coherent format. Specialist terms are used appropriately. Few, if any, errors in grammar, punctuation and spelling. (5–6 marks) **Level 2** Answer may describe some processes and may not make the correct order clear. For the most part the information is relevant and presented in a structured and coherent format. Specialist terms are used for the most part appropriately. There are occasional errors in grammar, punctuation and spelling. (3–4 marks) **Level 1** An incomplete answer, naming some processes without describing them and omitting other processes. Answer may be simplistic. There may be limited use of specialist terms. Errors of grammar, punctuation and spelling prevent communication of the science. (1–2 marks) **Level 0** Insufficient or irrelevant science. Answer not worthy of credit. (0 marks)	6	**relevant points include:** • energy enters the food chain from sunlight • energy trapped by banana plants/chlorophyll in leaves of banana plants • by photosynthesis • energy trapped in food/sugar then • energy transferred from one organism to another (from producer to primary consumer) by feeding • energy in banana plants transferred to root borers, banana aphids and banana skippers by feeding • energy transferred from primary consumers to secondary consumers/ants and wasps • energy transferred from secondary consumers to tertiary consumers/birds then • energy is lost at each stage/trophic level as it is converted into less useful forms • examples of methods of energy loss from this food web includes excretion, heat from respiration and egestion
			Total	**12**	

Question			Expected answer	Marks	Additional guidance
8	(a)	(i)	2:3 (1)	1	
		(ii)	become extinct in region 2(no mark) only 1 male in region 2 so more likely to become extinct / male:female ratios more favourable in regions 1 and 3 (1) if male in region 2 dies none of the females will reproduce (1) small area of territory per bird so, not a large enough habitat / may not have enough territory to breed / be competing with each other (1)	3	**must use data they have selected to give a valid explanation and justify choice** **allow** higher level answers above target grade in terms of offspring of Great Bustards in region 2 will have less genetic diversity (1) **allow** specific examples of competition, eg in the small area they are all competing for a small amount of food (1)
	(b)		protect habitat / create new habitats (1) legal protection (1) education programmes (1) captive breeding (1) cull predators (1)	2	
			Total	**6**	

Question			Expected answer	Marks	Additional guidance
9			direct measurement of pollutant levels, where higher values show more pollution (1) measurement of presence/absence of indicator species (1) where less lichen (in village) shows higher pollution (1)	3	**allow** examples of direct measurement of pollutants eg sulfur dioxide, nitrogen oxides max (1)
			Total	**3**	

Question			Expected answer	Marks	Additional guidance
10	(a)		right side pumps blood to lungs (1)	1	
	(b)		**any two from:** white blood cell kills microbes / engulfs microbes / makes antibodies (1) platelets causes blood to clot / prevents excessive bleeding (1) plasma transports food molecules, water, antibodies and waste products around the body (1)	2	**allow** specific names of cells eg lymphocyte **ignore** fights disease **allow** thrombocyte **ignore** forms a scab answer must reference transporting multiple substances to gain credit
	(c)		idea that haemoglobin carries oxygen (1) lack of oxygen for respiration / not enough oxygen to muscles / can't exercise (1)	2	
			Total	**5**	

Question			Expected answer	Marks	Additional guidance
11	(a)		respiration (1)	1	
	(b)	(i)	nucleus and mitochondria (1)	1	
		(ii)	because chromosomes are made of DNA (1) and chromosomes are too small to be seen with the microscope (1)	2	
			Total	**4**	

Question			Expected answer	Marks	Additional guidance
12	(a)		bluecrop and toro / spartan and toro (1)	1	
	(b)		choose genetic engineering / ora (1) because cloned blueberries would be (genetically) identical to one of existing varieties / would not get new combination of characteristics / AW (1) but genetic engineering allows the wild taste gene to be inserted into the Spartan blueberry (1)	3	**answers must support method chosen to gain full credit** if cloning chosen **allow** 1 mark for reason why genetic engineering not chosen eg unexpected harmful effects
	(c)		maybe unexpected (harmful) effects / may escape into the wild / breed with wild plant (1)	1	**allow** expensive / technically difficult **ignore** time consuming **allow** unknown consequences **allow** ethical argument **allow** could be harmful / may be harmful **ignore** mutations
			Total	**5**	

Question	Expected answer	Marks	Additional guidance
13 ✎	**Level 3** Answer describes correctly the structural and genetic differences between sperm cells and body cells. The purpose of these adaptations is thoroughly explained. All information in answer is relevant, clear, organised and presented in a structured and coherent format. Specialist terms are used appropriately. Few, if any, errors in grammar, punctuation and spelling. (5–6 marks) **Level 2** Answer describes most of the structural differences between sperm cells and body cells with a limited explanation of their importance. The haploid nature may be stated but not fully explained. For the most part the information is relevant and presented in a structured and coherent format. Specialist terms are used for the most part appropriately. There are occasional errors in grammar, punctuation and spelling. (3–4 marks) **Level 1** Answer describes correctly one or two differences and gives a correct explanation for one of them. There may be limited use of specialist terms. Errors of grammar, punctuation and spelling prevent communication of the science. (1–2 marks) **Level 0** Insufficient or irrelevant science. Answer not worthy of credit. (0 marks)	6	**relevant points include** differences: • many mitochondria in sperm compared to body cell • acrosome in sperm, not present in body cells • haploid nucleus in sperm, diploid nucleus in body cell **allow** small in size **allow** streamlined / aerodynamic (shape) explanation: • (mitochondria) for energy to swim • (acrosome) to produce enzymes / for digestion (of cell membrane) • (haploid nucleus) allows full or diploid number of chromosomes to be formed after fertilisation **allow** (enzymes) for digestion (of cell membrane)
	Total	**6**	

Question			Expected answer	Marks	Additional guidance
14	(a)		feels his pulse on wrist / neck (1) counts number of pulses in a certain time (1)	2	
	(b)	(i)	it increases (in a steady pattern) (1)	1	
		(ii)	correct answer from graph approx (50 km per hour) (1) line extrapolated on graph (1)	2	
			Total	**5**	

Assessment Objectives (AO) Grid

(includes quality of written communication ✎)

Question	AO1	AO2	AO3	Total
1	1	2		**3**
2(a)	4			**4**
2(b)	2			**2**
3(a)	2			**2**
3(b)(i)		1		**1**
3(b)(ii)		1		**1**
4(a)	1			**1**
4(b)(i)		2		**2**
4(b)(ii)	1	1		**2**
5(a)	1			**1**
5(b)✎		4	2	**6**
6(a)		2		**2**
6(b)		2		**2**
7(a)		2		**2**
7(b)	1			**1**
7(c)(i)		1		**1**
7(c)(ii)		2		**2**
7(c)(iii)✎	4	2		**6**
8(a)(i)		1		**1**
8(a)(ii)		1	2	**3**
8(b)	2			**2**
9	3			**3**
10(a)	1			**1**
10(b)	2			**2**
10(c)		2		**2**
11(a)	1			**1**
11(b)(i)		1		**1**
11(b)(ii)		1	1	**2**
12(a)		1		**1**
12(b)		2	1	**3**
12(c)	1			**1**
13✎	6			**6**
14(a)	2			**2**
14(b)(i)		1		**1**
14(b)(ii)		2		**2**
Totals	**35**	**34**	**6**	**75**

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