

Cells/reproduction

7A & 7B

35 min

35 marks

Q1-L3, Q2-L4, Q3-L5, Q4-L5, Q5-L6, Q6-L6

1. (a) not enough light *accept 'no light' or 'not enough Sun' or 'no chlorophyll'* 1
do not accept 'not enough water' or 'urine from the hutch'
- (b) **the answer must show an understanding of the need for a fair test**
- (i) any **one** from 1
• as a control **or** comparison
• to make it a fair test
• to see if the grass is affected by light
accept 'to show the effect of the Sun'
- (ii) it will die *accept 'goes brown' or 'rots'* 1
do not accept 'loses its colour'
- (c) they grow ✓ 1
they reproduce ✓ 1
if more than two boxes are ticked deduct one for each incorrectly ticked box
minimum mark zero
- [5]**
2. (a) (i) Katie ✓ *both answers are required for the mark* 1
Becca ✓ *if more than two boxes are ticked,*
award no mark

- (ii) any **one** from 1
- their mother **or** Pam has freckles
 - their father **or** David has freckles
 - their parents have freckles
 - their grandmother **or** Mary has freckles
 - only family B has freckles

*accept 'Rachel and Bill do not have freckles'
 accept 'a grandparent has freckles'
 accept 'their family **or** the family on the right has freckles'
 accept 'freckles run in the family'
 accept 'family A does not have freckles'*

- (iii) his parents **or** Bob and Emily do not have freckles 1

*accept 'his family does not have freckles'
 accept 'his grandparents do not have freckles'
 accept 'he is not in family B' if the answer for (ii) is 'only family B has freckles'*

- (b) (i) egg cell ✓ 1
 sperm cell ✓

***both** answers are required for the mark if more than two boxes are ticked, deduct one mark for each incorrect tick minimum mark zero*

- (ii) reproductive system ✓ 1

if more than one box is ticked, award no mark

[5]

3. (a) (i) one is more active 1
- accept 'one does sport **or** plays football'
 accept 'they have different metabolic rates'
 accept 'one works harder **or** does more work'*

- (ii) carbohydrates 1
- answers may be in either order
 accept a named carbohydrate, eg 'sugar' **or** 'glucose' **or** 'starch'*

fats 1

- (b) (i) 300 1

- (ii) any **one** from 1
- a boy's bones **or** teeth are still growing

*accept '15 year-old male is growing **or** still developing'*

- by 30 the bones have already developed

accept '30 year-old male has stopped growing'

- (c) any **one** from 1

- a pregnant female supplies the baby with protein

accept 'she supplies the baby'

- a pregnant female needs protein for herself and the baby

accept 'she needs it for herself and the baby'

- the baby needs protein

- (d) any **one** from 1

- a 15 year-old female menstruates

- a 15 year-old female has periods

[7]

4. (a) (i) the nucleus of the egg and the nucleus of the sperm join **or** fuse *accept 'the sperm and the egg join'* 1
accept 'a sperm fertilises an egg'
'a sperm meets an egg' is insufficient
- (ii) the oviduct **or** fallopian tube 1
- (iii) uterus *accept womb* 1
- (b) any **one** from 1
- the egg cannot pass down the oviduct
 - the sperm and egg cannot meet
 - sperm cannot get through
- do not accept 'the egg cannot reach the uterus'*
- (c) any **one** from 1
- muscles contract
 - contractions

[5]

5. (a) **answers may be in either order**
- cell wall 1
- chloroplast *accept 'starch grains'* 1
- (b) (i) photosynthesis 1
- (ii) it decreases *accept 'it gets less' or 'they are used up'* 1
do not accept 'they die out'
- (c) glucose *accept 'sugar'* 1
- any **one** from 1
- for energy
 - for respiration

[6]

6. (a) (i) C and E 1
- answers may be in any order*
both answers are required for the mark
- (ii) C 1
- (iii) any **one** from 1
- to trap **or** absorb light
- photosynthesis *accept 'to make glucose or sugar or starch or carbohydrate or food'*

(b)	(i)	A		1
	(ii)	any one from	<i>accept 'lungs'</i>	1
		<ul style="list-style-type: none"> • windpipe • trachea • airways • bronchus • bronchiole • oviduct or fallopian tube 		
	(iii)	to remove mucus	<i>accept 'to remove bacteria'</i> <i>accept 'to move mucus along'</i> <i>accept 'to move or remove bacteria or dust particles'</i> <i>'it is a self cleaning mechanism' is insufficient</i> <i>do not accept 'they clean dust or bacteria out of the lungs</i> <i>'accept 'to move an ovum or egg along' if the oviduct or fallopian tube is given as the answer to part ii</i>	1
(c)		B		1

[7]