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'
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
       • 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'
do not accept 'loses its colour'
(c) they grow ✓
   they reproduce ✓
   if more than two boxes are ticked deduct one for each incorrectly ticked box
   minimum mark zero

2. (a) (i) Katie ✓
   Becca ✓
   both answers are required for the mark
   if more than two boxes are ticked,
   award no mark
(ii) any one from

- 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

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 ✓
    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 ✓

if more than one box is ticked, award no mark

3. (a) (i) one is more active

accept ‘one does sport or plays football’
accept ‘they have different metabolic rates’
accept ‘one works harder or does more work’

(ii) carbohydrates

answers may be in either order

accept a named carbohydrate, eg ‘sugar’ or ‘glucose’ or ‘starch’

fats

(b) (i) 300

(ii) any one from

- 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

- 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

- a 15 year-old female menstruates
4. (a) (i) the nucleus of the egg and the nucleus of the sperm join or fuse

(ii) the oviduct or fallopian tube

(iii) uterus accept womb

(b) any one from
- 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
- muscles contract
- contractions

5. (a) answers may be in either order

- cell wall
- chloroplast accept ‘starch grains’

(b) (i) photosynthesis

(ii) it decreases accept ‘it gets less’ or ‘they are used up’
do not accept ‘they die out’

(c) glucose accept ‘sugar’

- any one from
  - for energy
  - for respiration

6. (a) (i) C and E answers may be in any order both answers are required for the mark

(ii) C

(iii) any one from
to trap or absorb light photosynthesis accept ‘to make glucose or sugar or starch or carbohydrate or food’
(b) (i) A
(ii) any one from
• windpipe
• trachea
• airways
• bronchus
• bronchiole
• oviduct or fallopian tube

(iii) to remove mucus
accept ‘lungs’

(c) B