CAMBRIDGE
INTERNATIONAL EXAMINATIONS

JUNE 2003

INTERNATIONAL GCSE

MARK SCHEME

MAXIMUM MARK: 40

SYLLABUS/COMPONENT: 0610/01

BIOLOGY
Paper 1 (Multiple Choice)

UNIVERSITY of CAMBRIDGE
Local Examinations Syndicate

Question Number	*Key*	*Question Number*	*Key*
1	**B**	21	**C**
2	**A**	22	**D**
3	**B**	23	**D**
4	**D**	24	**C**
5	**B**	25	**D**
6	**A**	26	**D**
7	**D**	27	**C**
8	**A**	28	**B**
9	**A**	29	**D**
10	**B**	30	**B**
11	**C**	31	**A**
12	**D**	32	**C**
13	**C**	33	**C**
14	**B**	34	**C**
15	**C**	35	**C**
16	**A**	36	**D**
17	**D**	37	**A**
18	**C**	38	**A**
19	**C**	39	**B**
20	**D**	40	**A**

TOTAL 40

CAMBRIDGE
INTERNATIONAL EXAMINATIONS

JUNE 2003

INTERNATIONAL GCSE

MARK SCHEME

MAXIMUM MARK: 70

SYLLABUS/COMPONENT: 0610/02

BIOLOGY
Paper 2 (Core)

UNIVERSITY of CAMBRIDGE
Local Examinations Syndicate

1 (a) excretion;

growth;

movement; ignore - locomotion

nutrition; ignore - feeding

reproduction;

sensitivity/irritability;

Accept descriptions
Any three – 1 mark each [3]

(b) put mud in muslin bag/equivalent – workable apparatus;

suspend over limewater/calcium hydroxide solution/hydrogencarbonate/ bicarbonate indicator;

in sealed container;

incubate/leave for 12+ hours;

look for limewater to go cloudy/milky/white/hydrogen carbonate to go yellow; carbon dioxide released indicates respiration;

reference to use of control;

Apply pattern of mark scheme to alternative approaches
e.g. release of heat from or use of oxygen for respiration.

Credit annotated diagrams
Any four – 1 mark each [4]

Total [7]

2 **(a)** **(i)** **X** – stigma/carpel;

Y – anther/stamen; [2]

(ii) small/insignificant "petals"/flowers "open";
do not prevent wind access to anthers/stigma/pollen;

stamens/anthers hang outside of flower/petals;
to release pollen into wind/air;

stigma feathery;
trap/filter pollen (from air);

stigma hangs outside flower/petals;
to catch pollen (in the wind);

Any feature plus explanation – 1 mark each [2]

(iii) no smell/scent;

no bright colours of petals/flowers/coloured green;

no nectar/nectary;

inconspicuous shape/size of flower/petals;

dry/dusty pollen;

large quantities/smaller size pollen;

Also features listed in **(ii)** above but **not** given
in candidate's response to **(ii)**
Any two – 1 mark each [2]

(b) **(i)** southwest; [1]

(ii) most fruit found to north and east; apply error carried forward [1]

(iii) distribution of fruit on branches;

distribution of branches on tree;

animals feed on/collect fruits from one region around tree;

other valid biological suggestions; ignore - human intervention.

Any one – 1 mark [1]

Total [9]

3 **(a)** **(i)** **C**/(i) alongside a relevant arrow; [1]

(ii) **D**/(ii) alongside a relevant arrow; [1]

(iii) **P**/(iii) alongside a relevant arrow; [1]

(iv) **R**/(iv) alongside a relevant arrow; [1]

If in any section more than one label is given all of that label must be correct

(b) **(i)** less/no (trees/leaves) to photosynthesise;

more carbon dioxide in air/less removed from air;

no/less (leaves/wood) to decay;

Any two – 1 mark each [2]

(ii) less (leaves to) transpire/evaporation of water/evapotranspiration;

less roots/plants to absorb water (from deep layers);

less water v/water vapour in air/less rainfall;

Ignore - refs to floods/droughts/erosion/desertification.

Any two – 1 mark each [2]

Total [8]

4 **(a)** **(i)** **A** – nucleus/nuclear membrane;

B – cytoplasm; [2]

(ii) label **C** clearly linked to a cell membrane in each cell; [1]

(b) **(i)** has cilia (on one surface/end of cell); ignore - hair

to move mucus; reject - trap bacteria/dust, etc. [2]

Credit valid references to goblet cells and function of producing mucus

(ii) has haemoglobin/no nucleus/biconcave;

transport oxygen; [2]

(c) **(i)** movement of molecules/particles/ions;

down concentration gradient/from higher to lower concentration; [2]

(ii) movement of water (molecules);

across/through partially/semi/differentially/selectively permeable membrane. [2]

Total [11]

5 **(a)** mitosis;

diploid;

meiosis;

haploid;

gametes; [5]

(b) use of correct symbols/**X** and **Y**;

parent genotypes shown;

gamete genotypes shown;

offspring genotypes shown;

phenotypes for both sexes identified.

parent genotype wrong – max 3

Any four – 1 mark each [4]

Total [9]

6 **(a)** top left box to 2nd right box;

2nd left box to top right box;

bottom left box to bottom right box; [3]

(b) **(i)** label to colon/large intestine; [1]

(ii) label to liver; reject - gall bladder [1]

(iii) label to liver; [1]

(iv) label to pancreas; reject - small intestine. [1]

Total [7]

7 **(a)** **A** – refracts/bends light rays/lets light enter eye;
ignore - protection

B – focuses light rays/image on to the retina/fovea;
ignore - accommodation/change in shape

C – controls light entering (inner) eye/reaching retina/lens;
ignore - change in pupil

D – changes light into/generates nerve/electrical impulses;
ignore - signals unqualified/messages [4]

(b) more/too much light enters/reaches retina;

dazzles person/causes blurred vision/damages retina;
ignore - double vision. [2]

Total [6]

8 **(a)** (translocation) is movement of soluble materials/sugars/amino acids;

from supply to demand/clearly identified example;

in phloem;

(transpiration) is diffusion/loss of water vapour/evaporation of water;

from leaves/through stomata to atmosphere;

down concentration gradient;

Any four – 1 mark each [4]

(b) leaves lose water;

water moves/passes/is drawn up/ref to transpiration stream;

up stem/leaf stalk;

through xylem/vessels;

(dye) dissolved/carried in water.

Any four – 1 mark each [4]

Total [8]

9	**(a)**	**(i)**	light/sunlight (energy);	ignore - solar	[1]
		(ii)	chemical (energy);	ignore - potential	[1]
	(b)	**(i)**	bacteria/fungi;	ignore - decomposers/saprophytes	[1]
		(ii)	heat/thermal (energy);		[1]
	(c)		energy is not passed back to the sun/grass/producer/ not recycled/OWTTE.		[1]

Total [5]

CAMBRIDGE
INTERNATIONAL EXAMINATIONS

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INTERNATIONAL GCSE

MARK SCHEME

MAXIMUM MARK: 70

SYLLABUS/COMPONENT: 0610/03

BIOLOGY
Paper 3 (Extended)

UNIVERSITY of CAMBRIDGE
Local Examinations Syndicate

1 (a) one mark for each part (drawn) and labelled correctly:

renal artery;
urethra;
ureter;
one mark for quality of drawing;
MAX. 2 FOR LABELLING "STUMPS" ONLY **4**

(b) water;
urea; Allow nitrogenous waste
uric acid;
salts or minerals or named salts; Allow vitamins
hormones;
Reject 'waste products unqual.'/'ions unqual.' **max. 3**

(c)
i. ref. to blood enters machine from patient AW;
(ONLY CREDIT ONCE)
ii. ref. to pump;
iii. blood passes along + dialysis tubing AW/visking tubing/cellulose or cellophane tubing;
iv. ref. to tubing AW being semi-permeable/selectively permeable/ acting as a filter AW;
v. ref. to surrounding liquid;
vi. containing + some salts/glucose/no urea;
vii. ref. to fluid has same O. P. as blood;
viii. waste materials/excess materials + pass from blood;
ix. ref. to diffusion;
x. ref. to bubble trap/counter flow;
x. 'cleaned' blood returns + to patient's circulation/body AW;
(ONLY CREDIT ONCE) **max. 4**

(d) **(i)** ref. to internal environment;
maintained (at constant level)/regulated/balanced; **2**

(ii) ref. to maintaining level of named substance in blood;
method outlined, e.g. filtration/reabsorption/osmosis/diffusion; **2**

(iii) suitable organ named;
named substance levels maintained;
ref. to mechanism for maintaining constant level; **3**

max 18

2 (a) one mark for each column drawn and shaded correctly; **2**

(b) (i) 12 (%); **1**

(ii) AWARD 2 MARKS FOR CORRECT ANSWER, EVEN WITHOUT WORKING
50 + 12 + 13 + 6 + 7;
= 88 (%); **2**

(c) REJECT REF. TO FLUORINE ONCE in (i), (ii) or (iii)

(i) fluoride (in water) reduces (the number of) decayed teeth in children; **1**

(ii) add fluoride to the drinking water in town B;
advise children to use fluoride toothpaste;
use other suitable, named, source of fluoride; **max 1**

(iii) i. ref. to side effects of too much fluoride, e.g. browning of tooth enamel or possible cancer risk;
ii. ref. to importance of personal choice/makes water impure;
iii. ref. to allergies to fluoride;
iv. ref. to cost of fluoridation;
v. ref. to treatment of whole population when not all benefit;

Reject refs. to fluoride flavouring water/refs. to being bad for health/has side effects unqual. **max 1**

max 8

3 **(a)** involves giving the organism two names;
ref. to genus and species; **2**

(b) **(i)** *Caulerpa* grows at twice their rate AW;
ref. to competition (for light/CO_2/space for attachment/other plausible factor AW); Reject refs. to O_2 **2**

(ii) ref. to primary consumer/(organism) that feeds on plants/producers; **1**

(iii) ref. to disease/predation or shortage of + food/herbivores/sea urchins;
resulting in death/migration AW; **2**

(c) ref. to chlorine being + dangerous/poisonous/damaging to other organisms/a pollutant; **1**

(d) **(i)** i. ref. to possible effects on local food chains or food webs AW;
ii. ref. to destabilization of the ecosystem;
iii. ref. to extinction (of other organisms);
iv. ref. to local fishing industry;
v. ref. to importance of conservation;
vi. ref. to possible use of local species for medicines;
vii. ref. to effects on biodiversity; **max 2**

(ii) ref. to its ability to feed on *Caulerpa*; Reject ref. to pest unqual.
reduces competition between *Caulerpa* and local seaweeds;
reduces population of *Caulerpa*;
allows other species to grow again; **max 2**

(iii) i. it may eat other seaweeds as well;
ii. causing their extinction AW;
iii. ref. to no natural predators of the sea slug present AW;
iv. ref. to unbalancing + food chains/webs/ecosystem;
v. ref. to introduction of disease; **max 2**

max 14

4 (a) (i) (SIMILARITIES)

i. ref. to exoskeleton;
ii. ref. to jointed limbs AW;
iii. no backbone/ref. to invertebrate;
iv. both have segmented body;
v. both members of the arthropod group;
Accept ref. to stages of development, e.g. ecdysis/instars **max 3**

(ii) (DIFFERENCES)

1 MARK FOR TABLE, MAX. 4 FOR DIFFERENCES

i. table format with suitable headings;
ii. insects have 3 pairs of legs + arachnids have 4 pairs;
iii. insects have wings + arachnids do not; Allow refs to ability to fly
iv. insects have antennae + arachnids do not;
v. insects have compound eyes + arachnids do not/ref. to simple eyes;
vi. insects have 3 parts to the body + arachnids have 2 parts;
vii. arachnids have chelicerae/pincer-like jaws + insects do not;
viii. arachnids spin webs + insects do not; Allow insects can be social + arachnids are not AW; **max 5**

(b)

i. named insect;
ii. ref. to variation AW;
iii. due to sexual reproduction/mating;
iv. ref. to mutation;
v. variation/mutation + leads to differential survival AW;
vi. suggestion for environmental change, e.g. temperature, food available;
vii. suggested change to insect, e.g. thicker cuticle, larger wings;
viii. ref. to benefit of change to the organism;
ix. ref. to survival of fittest/natural selection;
x. favoured genes passed on to next generation AW; **max 7**

max 15

5 (a) ACCEPT OTHER PLAUSIBLE ANSWERS

i. ref. to unsuitable climate/temperature/rainfall/ref. to pollution;
ii. ref. to natural disasters, e.g. flooding/drought;
iii. water used for other purposes/diversion of rivers/building dams/poor irrigation;
iv. so plants are killed/poor germination/no food for animals; (linked to i. or ii. or iii.)
v. next year's seeds eaten through need for food;
vi. poor soil/lack of inorganic ions or fertiliser;
vii. so plants do not grow well; (linked to vi.)
viii. ref. to desertification/poor or thin soil;
ix. due to + deforestation/slash and burn; (linked to viii.)
x. ref. to lack of money + to buy seeds/fertiliser/pesticides/machinery/import food;
xi. ref. to war/farm redistribution;
xii. so there is no-one to harvest crops/too dangerous to tend crops/no experienced farmers AW; (linked to xi.)
xiii. ref. to urbanisation AW;
xiv. so there are fewer people to work the land/less land to grow crops on; (linked to xiii.)
xv. ref. to increasing population requiring food;
xvi. ref. to growth of + cash crops/monoculture/food for export (not suitable for local diet);
xvii. ref. to selling of food reserves to + settle national debt/maintain economy;
xviii. ref. to pest damage/disease (in crops or stored food);
xix. heat causes fresh produce to rot quickly AW;
xx. lack of suitable land to farm/ref. to overgrazing;
xxi. farmers poorly educated;
xxii. forests destroyed + so nothing to hunt/no food to collect;
xxiii. ref. to outmoded farm practices;
xxiv. ref. to poor transport/distribution; **max 10**

(b) i. ref. to <u>auxin</u>;
ii. sprayed onto e.g. tomato flowers to induce fruit production;
iii. happens even if pollination has not occurred;
iv. ref. to use of auxins in + weedkiller/herbicide;
v. so crops have less competition;
vi. ref. to effect (only) on broad leaved plants (so monocot crops unaffected);
vii. ref. to use of hormones (e.g. cytokinin) in tissue culture;
viii. to promote root and shoot formation/form a callus;
ix. ref. to BST (bovine somatotropin);
x. used with cattle to increase milk production (linked to ix)
xi. ref. to growth hormone/testosterone;
xii. used to increase meat production;
xiii. ref. to production of seedless fruit;
xiv. ref. to promotion of seed germination;
xv. ref. to production of short plants (to resist wind damage);
xvi. ref. to delaying fruit production/ripening;
xvii. ref. to increasing fruit yield AW; **max 5**

max 15

6 **(a)** i. ref. to a pair of alleles; Reject gene ref. once
ii. in which one is not dominant over the other AW;
Reject both dominant; Allow both equally dominant
iii. so both alleles have an effect in phenotype/heterozygous organism AW; **3**

(b) ACCEPT PUNNETT SQUARE
IF LINES ARE USED TO LINK GAMETES AND F1, THEY **MUST** BE CORRECT

i. mother = $I^A I^O$; Allow AO, I^A i
ii. father = $I^B I^O$;
iii. (parents) $I^A I^O$ X $I^B I^O$;

iv. (gametes) I^A I^O (X) I^B I^O

v. $I^A I^B$ $I^A I^O$ $I^B I^O$ $I^O I^O$;

	I^A	I^O
I^B	$I^A I^B$	$I^B I^O$
I^O	$I^A I^O$	$I^O I^O$

vi. $I^O I^O$ = baby with blood group; **6**

(c) **(i)** i. blood may + clump/clot/coagulate/agglutinate;
ii. due to presence of antigens on (the surface of) blood cells;
iii. and different antibodies present in other blood AW;
iv. ref. to no clumping if donor blood group is group O; **max 3**

(ii) i. placenta keeps the blood of mother and fetus separate AW;
ii. since the blood types could be different AW;
iii. but allows exchange of materials between mother and fetus AW; **3**

max 15

7 (a) MARK FIRST FIVE PARTS AND FUNCTIONS GIVEN ANY FIVE FROM:

i. penis + to insert sperm/semen + into vagina AW/ref. to erectile tissue;
ii. urethra + to pass sperm/semen + through penis;
Allow ref. to penis/ urethra + urine once;
iii. testis + to make sperm/testosterone;
iv. vas deferens/sperm duct + pass sperm from testis to urethra;
v. epididymis + to store/mature/move + sperm;
vi. scrotum + contain testes/to keep testes at lower temperature than that of body AW;
vii. prostate gland/seminal vesicles/cowper's gland + to produce seminal fluid AW; **5**

(b) (i) i. ref. to swimming;
ii. using tail;
iii. ref. to passing through cervix;
iv. ref. to passing through uterus/womb;
v. enter an oviduct/fallopian tube;
vi. ref. to chemical sensor AW;
vii. ref. to mitochondria + energy; **max 4**

(ii) i. ref. to zona pellucida;
ii. sperm penetrates egg membrane;
iii. ref. to use of enzymes/acrosome;
iv. head of sperm enters egg;
v. sperm nucleus and egg nucleus fuse;
vi. ref. to formation of zygote; **max 3**

(c) i. ref. to use of condom/femidom (during sexual intercourse);
ii. ref. to abstinence from sexual intercourse;
iii. ref. to screening of blood for transfusions/blood checked for HIV;
iv. ref. to use of sterile needles (for injecting drugs)/don't share needles;
Reject refs to clean needles;
v. ref. to maintaining one partner/not sleeping around;
vi. ref. to health education;
vii. avoiding contact with blood + example; **max 3**

max 15

CAMBRIDGE
INTERNATIONAL EXAMINATIONS

JUNE 2003

INTERNATIONAL GCSE

MARK SCHEME

MAXIMUM MARK: 40

SYLLABUS/COMPONENT: 0610/05

BIOLOGY
(Practical)

UNIVERSITY of CAMBRIDGE
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1 (a) * lose if ***no table***;

* use of ruled lines for columns and rows;

* time (table heading);

* height/level/measurement (table heading);

record of units mm/cm and min/(*A*) clock times;

readings taken at 5 min intervals;

records for both sets of dough S1 and S2;

manipulation of data/recording increase or differences;

max 5

(b) * *lose if bar chart*

orientation of axes; (time horizontal, height vertical)

labels for axes including units; ***(A) clock times***

plotting data using suitable scale; ***c. half the paper min.***

* plotting data for S1 (points visible, no obvious error, not (0,0));

* plotting data for S2 (points visible, no obvious error, not (0,0));

* clear lines;

each curve identified/use of key;

max 6

(c) curve for S1 rises (with time);

comment on rate of increase; ***suitable qualification***

curve for S2 does not rise;

Look at candidate's graph. If not as expected, apply scheme as S1 trend, S2 trend and suitable comment on rate of increase

3

(d) yeast is, living organism/fungus;

respiration;

without oxygen/anaerobic/fermentation;

sugar source of, food/nutrition/energy/substrate;

equation (for anaerobic respiration);

carbon dioxide evolved;

trapped/bubbles (remain in dough);

causes dough to rise;

rise stops as sugar runs out;

rise stops as yeast killed by alcohol;

dough sinks and valid explanation.

max 6

Total: 20

2 (a) (i) purple/mauve/lilac; ***reject precipitate/dark purple***

(protein) present;

2

(ii) add, sodium/potassium, hydroxide (solution);

then (a few drops) copper sulphate (solution);

2

(b) (i) Drawing – clear outline S4;

at least 5 cm in one direction;

main shell (if present)/pattern on dorsal surface (if shell absent);

foot/other soft parts, shown;

use label to help you identify presence of soft parts if drawing unclear or if snail in shell

Labels – shell/dorsal surface pattern; ***reject exoskeleton alone***

any soft part; ***(A) soft body reject eyes alone***

6

(ii) length of drawing measured correctly (± 2 mm);

correct calculation of "drawing length ÷ specimen length"; ***(1 d.p.) ratio needs to be labelled***

2

(c) *Candidates may use snails "as they are" in this beaker or remove some/all of them. Apply scheme to any sensible plan.*

use, thermometer/temperature probe;

place thermometer in contact with soft part of snail to record body temp.;

record temp. of surrounding air**;** ***(A) area reject earth***

repeats; ***(A) several snails***

investigate at different temps.;

leave snails to adjust to surroundings before measuring; ***(A) time ref.***

idea of fair test; (e.g. same procedure when investigating at different temps.; leave same time interval between measurements; use same number of snails; other detail of fair test) ***reject control***

max 3

(d) **(i)** hard/rigid;

colour/pattern;

contrast between inside and outside;

shape; ***(A) like ....***

hollow;

opening;

texture; ***(A) smooth qualified***

dimensions;

max 2

(ii) effervescence/fizzing/AW;

shell is made of calcium carbonate;

2

(iii) support/protection (***(A) shelter***)/camouflage/muscle attachment;

1

Total: 20

CAMBRIDGE
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JUNE 2003

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MARK SCHEME

MAXIMUM MARK: 40

SYLLABUS/COMPONENT: 0610/06

BIOLOGY
(Alternative to Practical)

UNIVERSITY of CAMBRIDGE
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1 (a) Two from:

temperature or warmth or heat/[same type of] [amount of] yeast/type of flour/same size measuring cylinder/same mass or weight of dough/ [same quantity of] [type of] sugar [2]

(ignore water [in q], amount of ingredients, pH, light, carbon dioxide, time, humidity, reading at eye level, cold)

(b) (i) Graph:

O orientation of axes and label of axes plus units;

S use of appropriate and even scale to fill half of the grid;

P plotting data A; B; C;

K key for separate date; max [5]

(ii) Line A - rises steadily;

Line B - does not rise/rises slightly/at a constant level;

Line C - rises and flattens; [2 stages] [3]

(iii) 80; [1]

(iv) Two from:

1. comment on **volume difference**, A more;
2. A has yeast [and B has none];
3. correct ref. to production of carbon dioxide; [2]

(v) Two from:

1. comment on **rate difference**/speeding up/faster;
2. substance X present in C [A has no X];
3. reasonable suggestion for role of substance X;

(accept enzyme, catalyst, improver, AW) [2]

Total 15

2 (a) 2 conditions = 1 mark. No ½ marks.

warmth [correct/suitable temperature/10 to 30°C if specified];

oxygen;

but apply **ecf** for part **(b)** [1]

(b) **Three from**:

1. identification of **one** workable condition **from (a)** for investigation - two sets one **with** and one **without**;
2. idea of sample size many seeds, a few seeds must be more than one seed for repetition idea;
3. some common factor of treatment between the two sets [with and without the condition] under investigation;
(equal watering, equal number of seeds, same species AW)
4. left to grow for same time period;
(if stated minimum 1 + days, accept up to 3 weeks) max [3]

Total 4

3 (a) (i) Drawing:

clear outline;

correct proportions;

Labels – 2 from:

Tentacles;

eye [to be located at the end of the larger tentacles];

foot [qualified];

shell [dorsal/visceral shell or hump];

unsegmented body;

(ignore reference to negative features) [4]

(ii) Magnification:

Check measurements given are those transcribed into the formula - drawing size; / actual size

calculation is correct stated as ....x 1+
(this must be more than 1 if drawings is as large as fig 3.1) max [2]

(iii) Similarity – one from:

both have tentacles/eyes/same head/shell;

Difference – one from:

A has no large external shell and B has/shell has different shape or comment on shape; AW [2]

(iv) mollusc: [1]

Total: 9

4 (a) (i) introduce a glowing splint/spill
(do not award for match will burn/candles lighting/splints that are already burning)

addition of pyrogallol; [1]

(ii) photosynthesis; [1]

(iii) 10 cm^3;
10 ÷ 5 = 2cm^3; [2]

(iv) Two from, for design of experiment:

1. method for setting up different light intensities;
(bright light in introduction - so maybe dimmer or less light but must have detail of how this is to be achieved/distances away from light bulb/AW)

2. describe how to control a factor that may alter rate over a certain time
(temperature - heat shield, carbon dioxide by adding hydrogen carbonate/AW)

3. additional feature of design –
(same time period for comparison of results/eliminate background light, carry out investigation in a darkened room/replicates/ repetition/same piece of pondweed/recovery time between sets of measurements AW) max [2]

(b)

	Colour	Explanation
(i)	purple [1]	carbon dioxide used up/ photosynthesis [1]
(ii)	red/orange [1]	balance [between photosynthesis and respiration] [1]
(iii)	yellow [1]	respiration of 3 water shrimps/ produce carbon dioxide [1]

Total: 12

Grade thresholds taken for Syllabus 0610 (Biology) in the June 2003 examination.

	maximum mark available	minimum mark required for grade:			
		A	C	E	F
Component 1	40	-	29	24	20
Component 2	70	-	37	25	19
Component 3	70	48	33	-	-
Component 5	40	35	29	22	20
Component 6	40	32	24	18	15

The threshold (minimum mark) for B is set halfway between those for Grades A and C.
The threshold (minimum mark) for D is set halfway between those for Grades C and E.
The threshold (minimum mark) for G is set as many marks below the F threshold as the E threshold is above it.
Grade A* does not exist at the level of an individual component.