



EXAM PAPERS PRACTICE

Boost your performance and confidence with these topic-based exam questions

Practice questions created by actual examiners and assessment experts

Detailed mark scheme

Suitable for all boards

Designed to test your ability and thoroughly prepare you

Level: IGCSE Oxford AQA Biology (9201)

Subject: Biology

Topic: IGCSE AQA Biology

Type: Mark Schemes

2002



1583

To be used by all students preparing for IGCSE Oxford AQA Biology (9201)
Students of other Boards may also find this useful

Biology

IGCSE AQA

Key skills



Mark schemes

- 1.** (a) stinging hairs / can sting 1
- (so) this harms herbivores / stops animals eating them 1
- (so) less of the plant is removed / damaged 1
- (b) clove (oil) 1
- it has the largest areas with no bacteria growing
allow largest inhibition zone or description of largest inhibition zone 1
- (c) antibiotics were not tested 1
- [6]**
- 2.** (a) **A** 1
- (b) **D** 1
- (c) use the same type of plant
or
give equal amount of water to each plant
ignore size of pot 1
- (d) (advantage) more minerals 1
- (disadvantage) cost / not free 1
- [5]**



<p>3. (a) compare them to (pictures in) a gardening manual / website</p> <p>send to laboratory (for testing)</p> <p>(b) (nitrate) stunted growth</p> <p>(magnesium) yellowing of leaves <i>allow chlorosis</i></p> <p>(c) (fertiliser S) has most nitrogen for good growth if no other marks awarded allow 1 mark for (fertiliser S) has more minerals than compost</p> <p>(and) has high(est) potassium content for stronger roots</p> <p>(it is also) cheaper than fertiliser T</p> <p>(however) has less phosphate than fertiliser T (although more than compost) so flowers / fruit perhaps less important for the gardener</p>	<p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>[8]</p>
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4.

(a) protein

1

(b) (i) (more) magnesium gives more growth / more leaves / more duckweed
if converse must be clear that less magnesium gives less growth

1

(ii) **A** gave highest number of leaves / plants **or** more than others
it equals 'A'
use of numbers must compare A with at least one other

or

A gave most growth / most duckweed **or** more than others
allow faster / fastest / better / best growth
allow more growth with nitrate / less growth without nitrate
do not allow 'no' growth without nitrate

(c) (i) mark (c) as a whole

sensible method:

e.g. mass / weighing

ignore dry or fresh

allow other sensible method involving measuring eg length of roots

– ignore 'size' of roots or measure roots unqualified

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1

(ii) corresponding explanation:

ignore accuracy

e.g. includes roots / includes whole plant

or

leaves vary in size

or

(length / mass / surface area given in c(i)) is a continuous variable

1

[5]



5.	(a) to kill virus or to prevent virus spreading	1
	(b) take (stem) cells from meristem or tissue culture <i>allow take cuttings</i>	1
	(c) use Benedict's solution glucoses turns solution blue to orange	1 1
	(d) Level 2 (3–4 marks): A detailed and coherent explanation is provided. The student makes logical links between clearly identified, relevant points that explain why plants with TMV have stunted growth. Level 1 (1–2 marks): Simple statements are made, but not precisely. The logic is unclear. 0 marks: No relevant content.	
	Indicative content • less photosynthesis because of lack of chlorophyll • therefore less glucose made so • less energy released for growth • because glucose is needed for respiration and / or • therefore less amino acids / proteins / cellulose for growth • because glucose is needed for making amino acids / proteins / cellulose	4
6.	(a) phloem	1
	(b) translocation	1

[8]



(c) either:

less (sugars for) respiration

1

(so) less energy released

1

or

less amino acids made (1)

(so) less protein produced or less protein synthesis (1)

or

less cellulose made (1)

(so) weaker cell walls (1)

(d) (aphids) can fly to another plant **or** part of the plant

ignore to fly unqualified

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1

to get (more) food

allow to find a mate

allow idea of less competition for food

allow to escape predators

*do **not** accept escape prey*

1

(e) (oil) prevents aphids from attaching to leaf **or** causes aphids to slide off leaf

ignore 'the leaf is slippery'

or

idea that oil may harm / kill the aphid

allow oil may be unpleasant to the aphid

1

(f) (plant / stem has) thorns

allow spines / spikes / prickles

ignore stings

do not accept thorns protect (the plant) from predators

1

(g) C

if any other letter given then no marks for the question 1

(fungi / spores) blown by / in direction of the wind

allow black spot / disease is blown by / in direction of
the wind

or

it's the closest plant (to A)

do not accept reference to bacteria / viruses / pollen
being blown

1

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(h) any **one** from:

- spread rose bushes out more
 - allow isolate the infected plant*
 - allow idea of barrier around infected plant*
 - ignore separate unless qualified*
- remove any infected parts of the plant
 - allow remove infected plant / A*
- use a fungicide
 - ignore pesticide*
 - do not accept insecticides / herbicide*

1

[11]