## MARK SCHEME for the May/June 2012 question paper

## for the guidance of teachers

## 0610 BIOLOGY

0610/62

Paper 6 (Alternative to Practical), maximum raw mark 40

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes must be read in conjunction with the question papers and the report on the examination.

• Cambridge will not enter into discussions or correspondence in connection with these mark schemes.

Cambridge is publishing the mark schemes for the May/June 2012 question papers for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.



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Mark schemes will use these abbreviations:

- ; separates marking points
- / alternatives
- R reject
- A accept (for answers correctly cued by the question, or guidance for examiners)
- AW alternative wording (where responses vary more than usual)
- underline actual word given must be used by candidate (grammatical variants excepted)
- D, L, T, Q quality of drawing / labelling / table / writing as indicated by mark scheme
- max indicates the maximum number of marks that can be given

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Q	uestion	Mark scheme	Mark	Guidance
1	(a)	(lemon juice is) <b>acid</b> (ic);	[1]	
	(b)	no colour change / less colour change in dish 2 ;	Max [1]	
	(c) (l)	lemon juice is acidic ;		
		denature enzyme ;		
		browning does not happen ;	[3]	
	(ii)	<u>Method:</u> put apples in high or very low temperature ;		
		<u>Result:</u> no or less colour change / not or less brown ;		
		<i>Explanation:</i> high temperatures denature enzymes OR cold temperatures inactivate enzymes / stops enzyme activity ;	[3]	
	(d) (l)	<u>Comparative colour change</u> cut surface goes darker brown / greater colour change ;		
		<u>Speed of reaction</u> cut surface turns brown more quickly ;	[2]	
	(ii)	cells separated and contents remain intact	[1]	
			[Total: 11]	

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space available ; <b>Detail: two</b> details from pair of antennae or pair eyes		ead in photograph at least half of		R shading / cro	ss hatching(incl	luding eyes)		
	<ul> <li>pair of mandibles / mouth parts ;</li> <li>Label 1 label mark only: one from eye / antenna / jaws or mouth or mandibles AW ;</li> <li>(b) (I) insects / Insecta ;</li> </ul>			[5]				
(	(b) (l)	insects	/ msecia ,		[1]			
	(ii)	<ul> <li>body divided into 3 parts or sections / head, thorax and abdomen;</li> <li>three pairs of legs;</li> </ul>		or sections / head, thorax and	[2]			
(	(c) (i)	<i>reducin</i> crush / add Be heat ; <i>starch t</i> add iod	g sugar test: mix with water / A nedict's solution ; fest: ine solution ;	•	[6]			

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(ii)	Observation for reducing s to green / yellow / orange Observation for starch tes to blue / black ;	/ red ;	[2]			
(d)	<i>method:</i> two containers – one with OR one container / choice cha plantain / AW ; <i>controlled variable:</i> idea of same time period / <i>collecting results:</i> record number flies seen / and plantain AW ; <i>conclusion:</i> if more flies in banana tha	banana, one with plantain / AW ; amber containing banana AND same mass fruit ; find change in mass of banana n plantain it is preferred fruit and ss in mass of preferred fruit and	Max [3]			
			[Total: 19]			

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3 (a) (i)	A filament ; B anther ; C style ; D stigma ;	[4]	
(ii)	В;	[1]	
(iii)	D ;	[1]	
(iv)	large petals / honey or nectar guides ;	[1]	
(b)	<b>20 ;</b> actual length = <u>length of pollen grain in diagram</u> ; magnification		
	actual length = <b>0.1</b> ;	[3]	
		[Total: 10]	